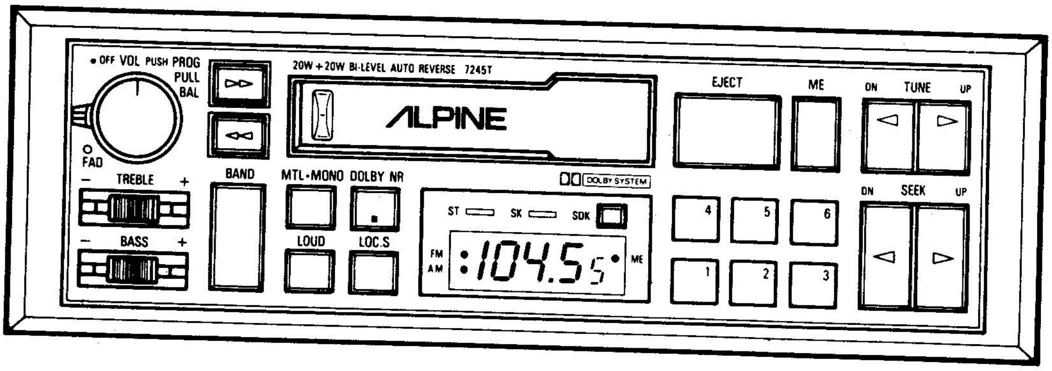
ALPINE **SERVICE MANUAL**

PLL Digital FM/AM Tuner
Cassette Deck


• OFF VOL PUSH PROG
PULL
BAL
FAD
TREBLE
BASS
20W + 20W BI-LEVEL AUTO REVERSE 7245T
ALPINE
BAND
MTL-MONO
DOLBY NR
LOUD
LOC.S
DOLBY SYSTEM
ST
SK
SDK
FM
AM
104.5
ME
EJECT
ME
DN
TUNE
UP
DN
SEEK
UP
4
5
6
1
2
3

For the tape mechanical parts of this model,
refer to the GW Series (GW75B38N) Service Manual (68P61811F02).

7245T

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Specifications

FM Radio

Intermediate Frequency	10.7±0.1 MHz
Frequency Range	87.5 to 108 MHz
Usable Sensitivity (Stereo 98 MHz)	26.2 dBf
Limiting Sensitivity (98 MHz)	26.2±3 dBf
Signal to Noise Ratio (Stereo)	45 dB
Image Rejection (106 MHz)	35 dB
IF Rejection (90 MHz)	60 dB
Distortion (Input 1mV, 98 MHz)	1.0%
Frequency Response	60 Hz; −10 ±3 dB 10 kHz; −14 ±3 dB
Stereo Separation (1kHz)	24 dB
SK Sensitivity	28.2 dBf

AM Radio

Intermediate Frequency	468 ±5 kHz
Frequency Range	522 to 1,611 kHz
Sensitivity (20 dB S/N, 999 kHz)	37.2 dBf
Signal to Noise Ratio (999 kHz)	40 dB
Image Rejection (1,404 kHz)	50 dB
IF Rejection (999 kHz)	40 dB
Distortion (1 kHz)	2.5%
Frequency Response	60 Hz; −6 ±3 dB 4 kHz; −15±5 dB

LW Radio

Intermediate Frequency	468 ±5 kHz
Frequency Range	146 to 290 kHz
Sensitivity (20 dB S/N, 218 kHz)	47.2 dBf
Signal to Noise Ratio (218 kHz)	38 dB
Image Rejection (272 kHz)	45 dB
IF Rejection (210 kHz)	50 dB
Distortion (1 kHz)	3%
Frequency Response	60 Hz; −8 ±3 dB 4 kHz; −15±5 dB

Tape Player

Wow & Flutter (JIS WRMS, MTT-111)	0.3%
Tape Speed (MTT-111)	4.75 cm/sec$^{+3}_{-1}$%
Signal to Noise ratio (MTT-212)	40 dB
Distortion (MTT-118)	3.0%
Frequency Response (MTT-216)	80 to 8,000 Hz
Separation (MTT-141)	30 dB
Crosstalk (MTT-121)	40 dB
FF & RWD Time (C-60)	100 sec

General

Load Impedance	4 ohms
Power Supply	14.0V DC
Output Power (10% THD)	15 W/ch
Pre-Output Voltage/Impedance	500mV/10Kohms
Semiconductors	17 IC's, 46 Transistors, 47 Diodes, 9 Zener Diodes, 2 FETs
Dimensions Nose	178 (W) × 50 (H) × 160 (D) mm
Chassis	176 (W) × 60 (H) × 9 (D) mm
Weight	1.7 Kg

Parts Locations and Disassembly Instructions

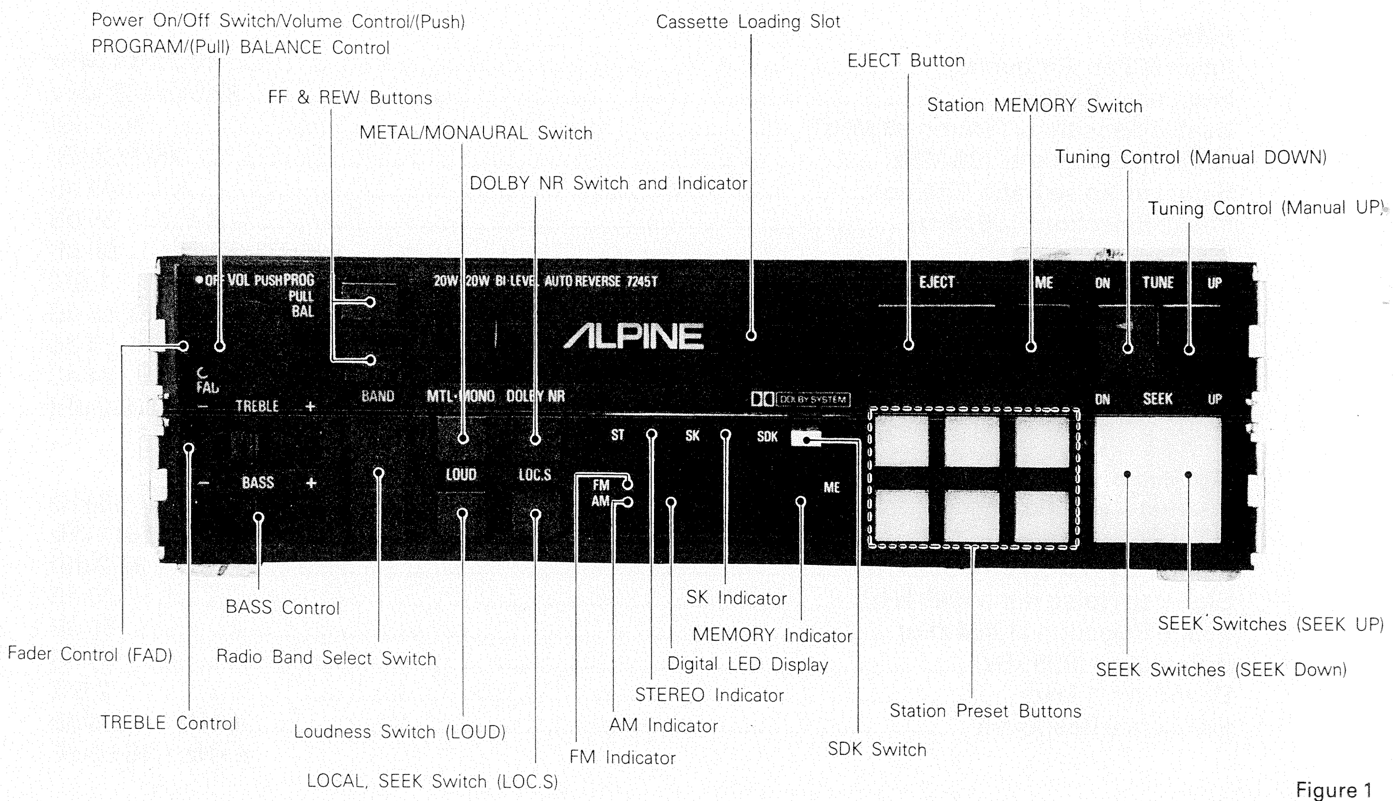

Power On/Off Switch/Volume Control/(Push)
PROGRAM/(Pull) BALANCE Control
FF & REW Buttons
METAL/MONAURAL Switch
DOLBY NR Switch and Indicator
Cassette Loading Slot
EJECT Button
Station MEMORY Switch
Tuning Control (Manual DOWN)
Tuning Control (Manual UP)
OFF VOL PUSH PROG
PULL BAL
20W 20W BI-LEVEL AUTO REVERSE 7245T
ALPINE
EJECT
ME
ON
TUNE
UP
FAD
TREBLE
BAND
MTL·MONO
DOLBY NR
DOLBY SYSTEM
ON
SEEK
UP
ST
SK
SDK
BASS
LOUD
LOC.S
FM
AM
ME
BASS Control
Fader Control (FAD)
Radio Band Select Switch
TREBLE Control
Loudness Switch (LOUD)
LOCAL, SEEK Switch (LOC.S)
SK Indicator
MEMORY Indicator
Digital LED Display
STEREO Indicator
AM Indicator
FM Indicator
SDK Switch
Station Preset Buttons
SEEK Switches (SEEK UP)
SEEK Switches (SEEK Down)

Figure 1

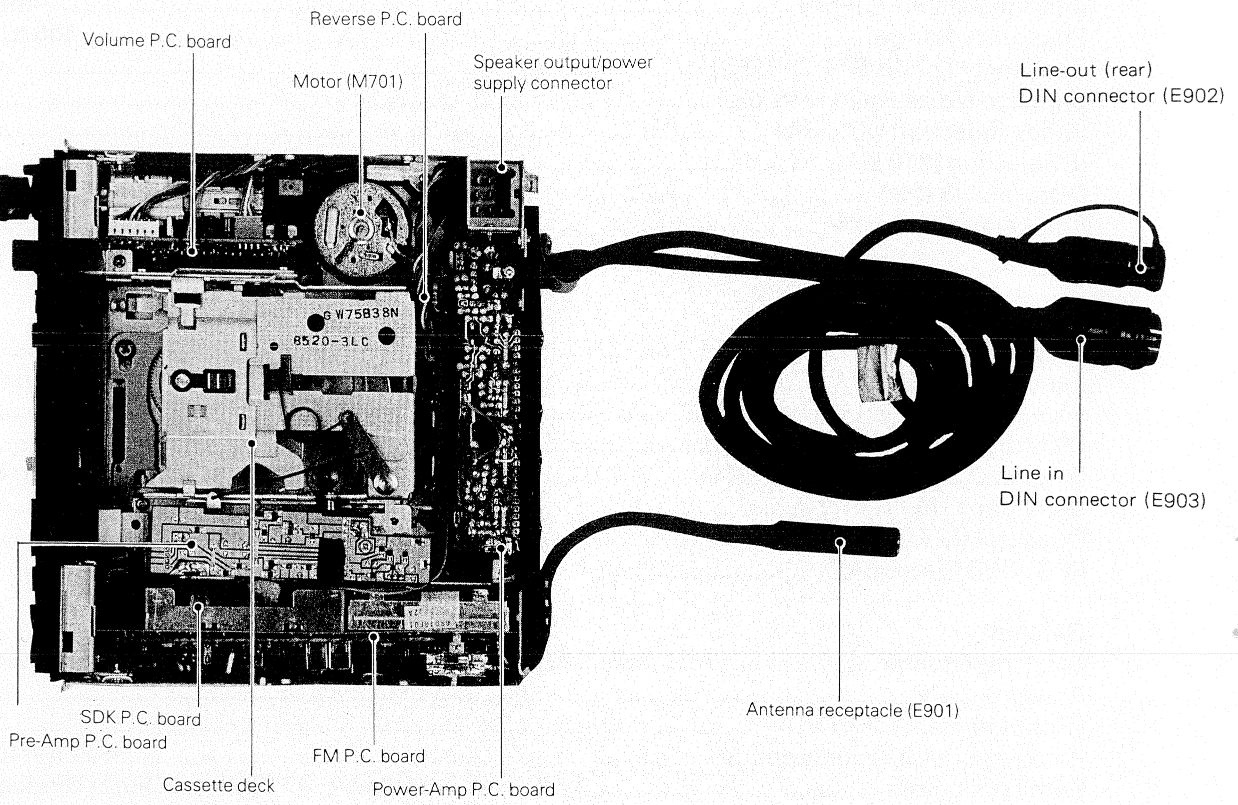

Volume P.C. board
Reverse P.C. board
Motor (M701)
Speaker output/power supply connector
Line-out (rear) DIN connector (E902)
Line in DIN connector (E903)
Antenna receptacle (E901)
SDK P.C. board
Pre-Amp P.C. board
Cassette deck
FM P.C. board
Power-Amp P.C. board

Figure 2

1. Removal of Top Cover

(1) Remove two screws marked "□" in Figure 4.

(2) Pull out the top cover in the arrow direction as shown in Figure 3.

2. Removal of Bottom Cover

(1) Remove two screws marked "○" in Figure 4.

3. Removal of Nosepiece

(1) Remove volume control & BFC knobs, and two slide knobs as shown in Figure 3.

(2) Remove four hooks marked "▲" as shown in Figures 3 and 5.

4. Removal of Main Amp P.C. Board

(1) After removal of top cover, disconnect the solder (a) as shown in Figure 5.

(2) Remove five screws marked "★" in Figures 4 and 5.

(3) Disconnect all wires from the P.C. board.

5. Removal of Cassette Deck

(1) After removal of the nosepiece and Main Amp P.C. board, remove four screws marked "☆" as shown in Figure 6.

(2) Disconnect all wires from the cassette deck.

(3) Cassette deck with Reverse P.C. board and Pre Amp P.C. board can be removed completely.

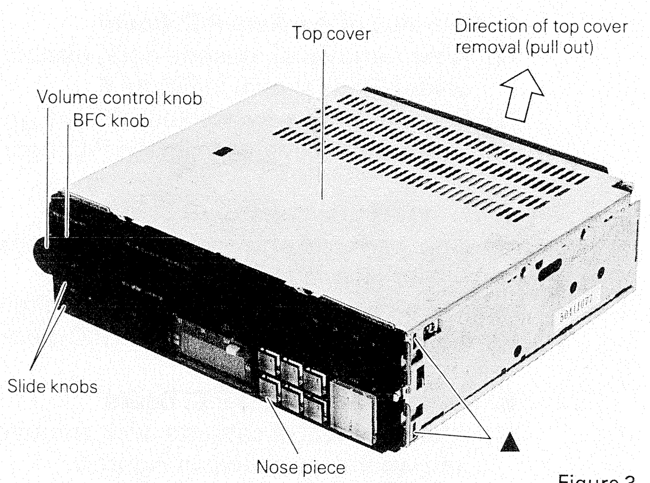

Top cover
Direction of top cover removal (pull out)
Volume control knob
BFC knob
Slide knobs
Nose piece
▲

Figure 3

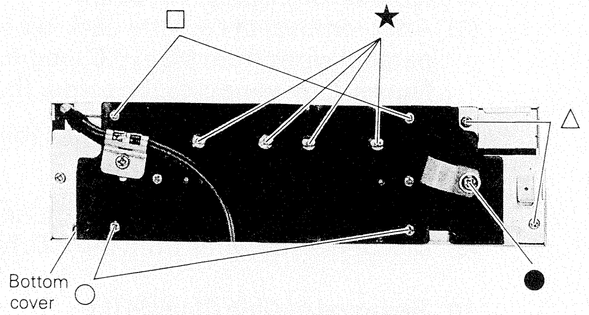

□
★
△
Bottom cover
○
●

Figure 4

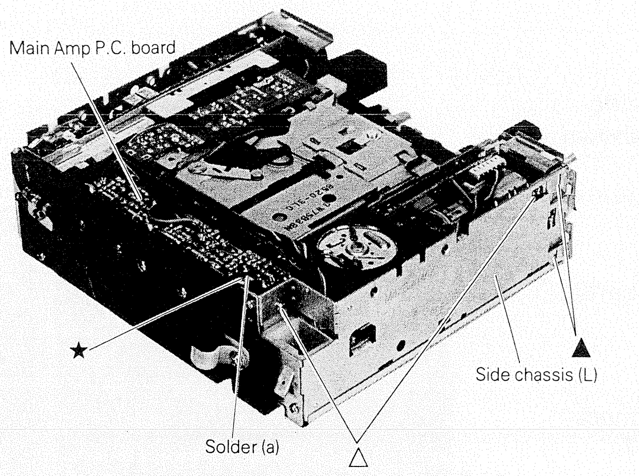

Main Amp P.C. board
★
▲
Side chassis (L)
Solder (a)
△

Figure 5

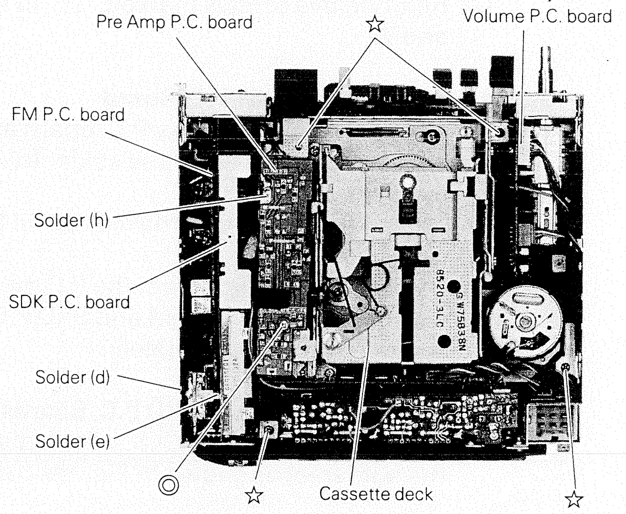

Pre Amp P.C. board
☆
Volume P.C. board
FM P.C. board
Solder (h)
SDK P.C. board
Solder (d)
Solder (e)
◎
☆
Cassette deck
☆

Figure 6

6. Removal of Pre Amp P.C. Board

(1) After removal of cassette deck, disconnect the solder (h) as shown in Figure 6.
(2) Remove the screw marked "◎" in Figure 6.
(3) Disconnect all wires from the P.C. board.

7. Removal of Reverse P.C. Board

(1) After removal of cassette deck, disconnect the solder (c) as shown in Figure 8.
(2) Remove the screw marked "◆" in Figure 8.
(3) Disconnect all wires from the P.C. board.

8. Removal of Volume P.C. Board

(1) After removal of cassette deck, remove the nut and washer as shown in Figure 9.
(2) Disconnect the solder (g) as shown in Figure 7.
(3) Disconnect all wires from the P.C. board.

9. Removal of Display P.C. Board

(1) After removal of cassette deck, disconnect Four parallel wires from Main P.C. board as shown in Figure 7, by removing the solder (f).

* Do not cut parallel wires when removing solder (f).

(2) Remove two screws marked "◇" in Figure 9.
(3) Disconnect all wires from the P.C. board.

10. Removal of Side Chassis (L)

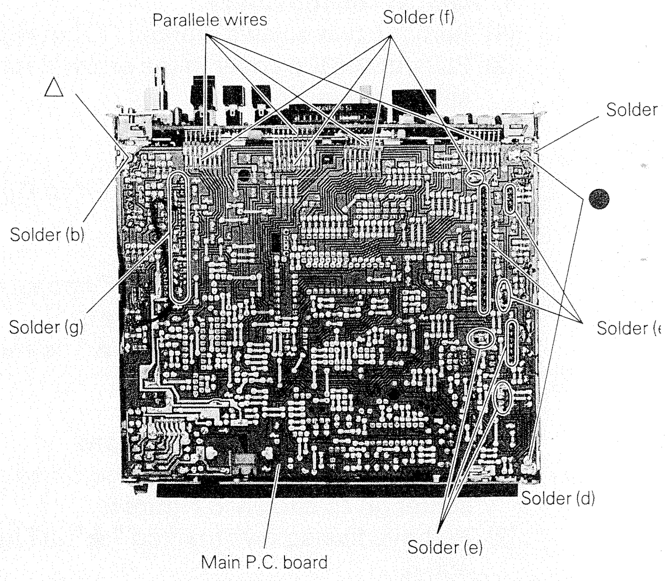
(1) After removal of Cassette Deck and bottom cover, disconnect the solder (b) as shown in Figure 7.
(2) Remove five screws marked "△" in Figures 4, 5 and 7.

11. Removal of Main P.C. Board

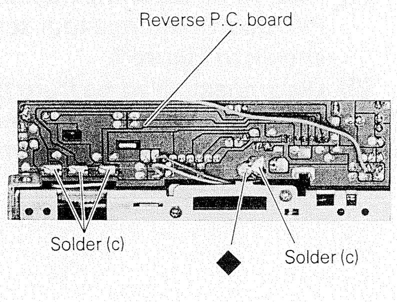
(1) After removal of display P.C. board and side chassis (L), disconnect the solder (d) as shown in Figures 6 and 7.
(2) Remove three screws maked "●" in Figures 4 and 7.
(3) Disconnect all wires from the P.C. board.
(4) Main P.C. board with FM and SKD P.C. boards can be removed completely.

12. Removal of FM and SKD P.C. Boards

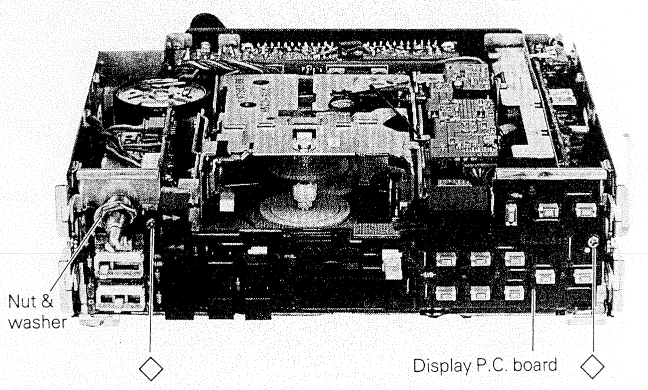
(1) After removal of Main P.C. board, disconnect the solder (e) as shown in Figures 6 and 7.



Figure



Figure

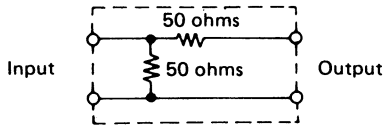


Figure

Adjustment Procedures

1. FM SECTION

(1) Dummy Antenna


50 ohms
Input
50 ohms
Output

For 50 Ohms FM Signal Generator

Figure 10

(2) Connections

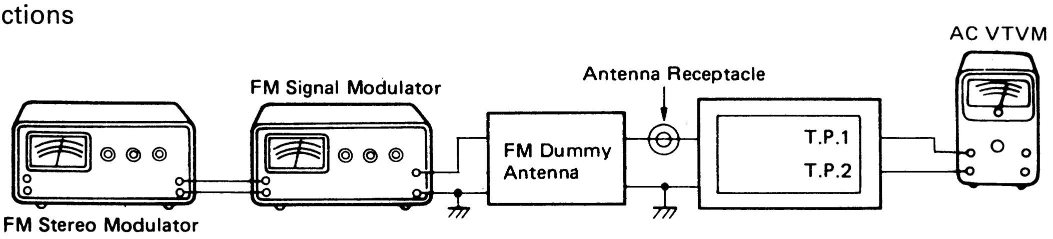

AC VTVM
FM Signal Modulator
Antenna Receptacle
FM Dummy Antenna
T.P.1
T.P.2
FM Stereo Modulator

Figure 11

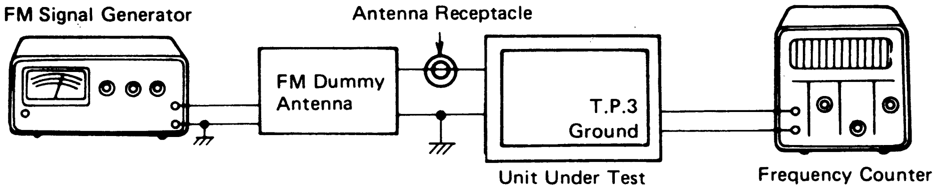

FM Signal Generator
Antenna Receptacle
FM Dummy Antenna
T.P.3
Ground
Unit Under Test
Frequency Counter

Figure 12

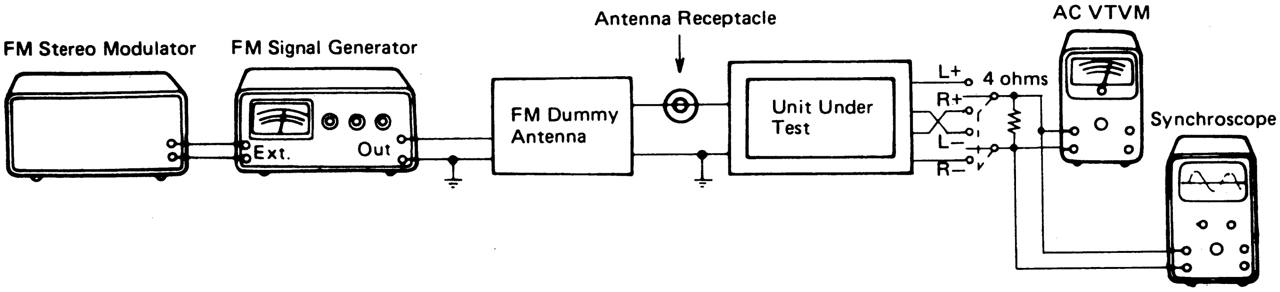
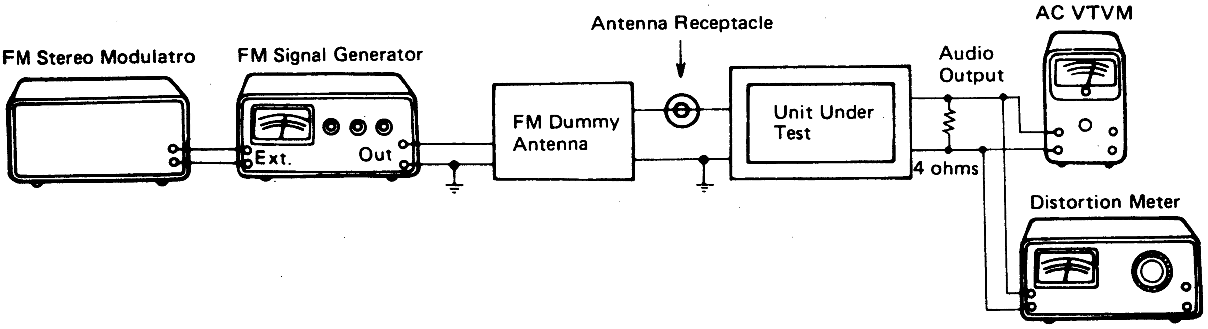

AC VTVM
Antenna Receptacle
FM Stereo Modulator
FM Signal Generator
Ext.
Out
FM Dummy Antenna
Unit Under Test
L+
R+
L−
R−
4 ohms
Synchroscope

Figure 13


Antenna Receptacle
AC VTVM
FM Stereo Modulatro
FM Signal Generator
Audio Output
Ext.
Out
FM Dummy Antenna
Unit Under Test
4 ohms
Distortion Meter

Fgure 14

(3) Location of Adjustment Parts
See Adjustment Locations.

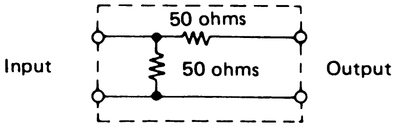
(4) Control Setting
Power Sw. .... ON
Band Sw. .... FM
Others .... OFF
Balance Control .... Mechanical Center
Treble/Bass Control .... Mechanical Center
Fader Control .... Front Position

(5) Adjustment Procedures

Step	Description	Connection	Signal Generator	Dial Control	Adjustment
1	IF Adjustment	Figure 11	98 MHz 60 dBμ (Mod. 400 Hz 30% Mono Signal)	98 MHz	T1 for 0±0.03V between T.P. 1 and T.P.2
2	Free-Running Frequency Adjustment	Figure 12	98 MHz 60 dBμ Mono signal No Modulation	98 MHz	VR3 for 76 kHz ±200 Hz
3	Separation Adjustment	Figure 13	98 MHz 80 dBμ, 1000 Hz R (L) Signal Modulation	98 MHz	VR1 for min. at L (R) channel Output
4	−3 dB Limiting Adjustment	Figure 14	60 dBμ at 98 MHz (Mod: 400 Hz, 30% Mono Signal)	98 MHz	VR401, 402 (VOLUME) for 2V (Reference Level)
			15 dBμ at 98 MHz (Mod: 400 Hz, 30% Mono Signal)	98 MHz	VR4 for −3±0.5 dB from reference level
5	FM Stereo Blend Adjustment	Figure 14	98 MHz 60 dBμ L Signal	98 MHz	VR401, 402 (VOLUME) for 2V at Lch. Output
			98 MHz 40 dBμ L Signal	98 MHz	VR2 for 10±1 dB separation

2. SDK

(1) Dummy Antenna


50 ohms
Input
50 ohms
Output

For 50 ohms FM Signal Generator

Figure 15

(2) Connections

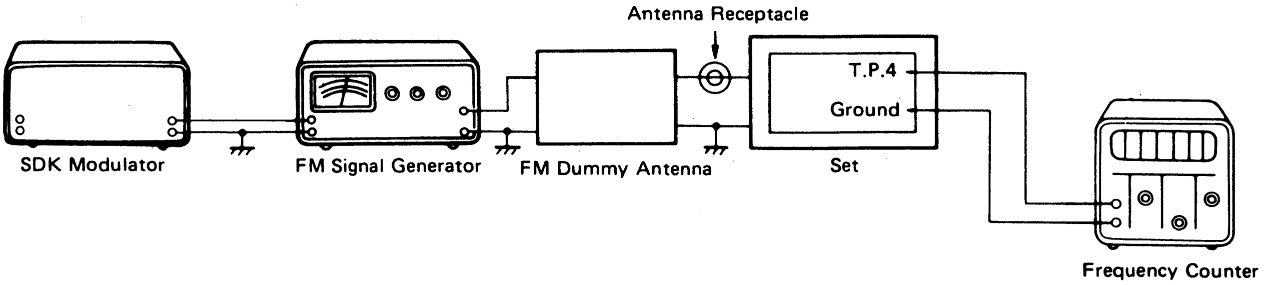

Antenna Receptacle
T.P.4
Ground
SDK Modulator
FM Signal Generator
FM Dummy Antenna
Set
Frequency Counter

Figure 16

(3) Control Setting

Power Switch .... ON
Band Select Switch .... SDK
Others .... OFF
Balance Control .... Mechanical center
Treble/Bass Control .... Mechanical center
Fader Control .... Front position

(4) Adjustment Procedures
DK Section

Step	Description	Connection	Signal Generator	Dial Control	Adjustment
1	DK Free-Running Frequency Adjustment	Figure 16	98 MHz 60 dBμ SK: OFF, DK: OFF	98 MHz	VR602 for 125 ± 1 Hz (T.P.6)

3. TAPE PLAYER

(1) Connection

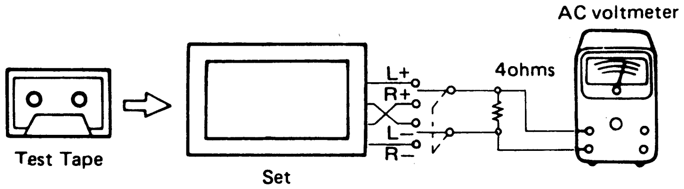


Figure 17

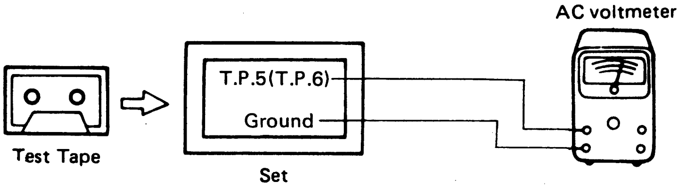


Figure 18

(2) Location of Adjustment Parts
See Adjustment Locations.

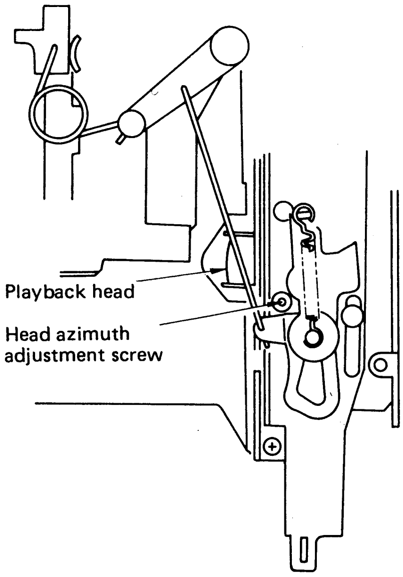
(3) Control Setting

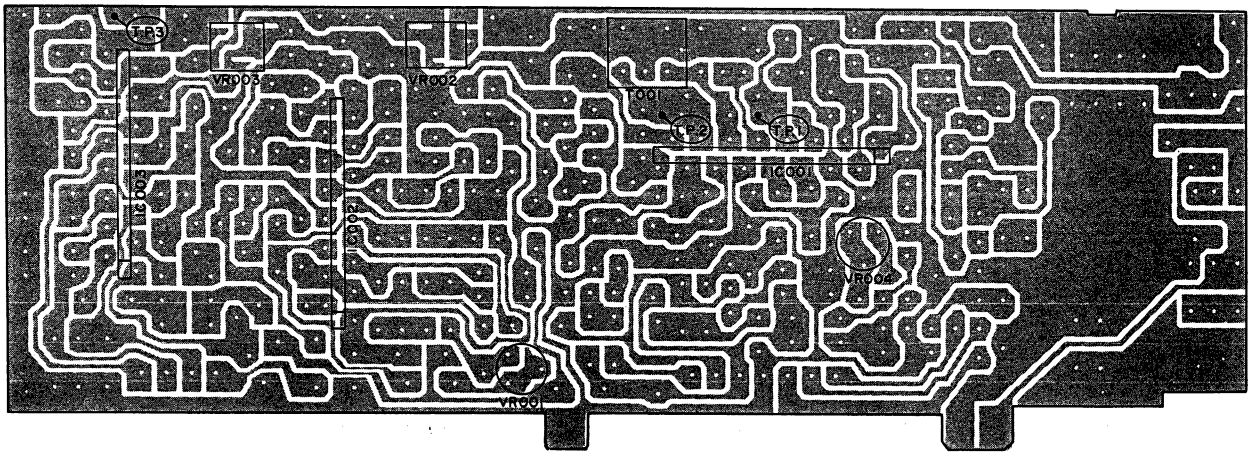
Power Sw. .... ON
Fader Control .... Front position
Balance Control .... Mechanical center
Treble/Bass Control .... Mechanical center
Other Sw. .... OFF

(4) Adjustment Procedure

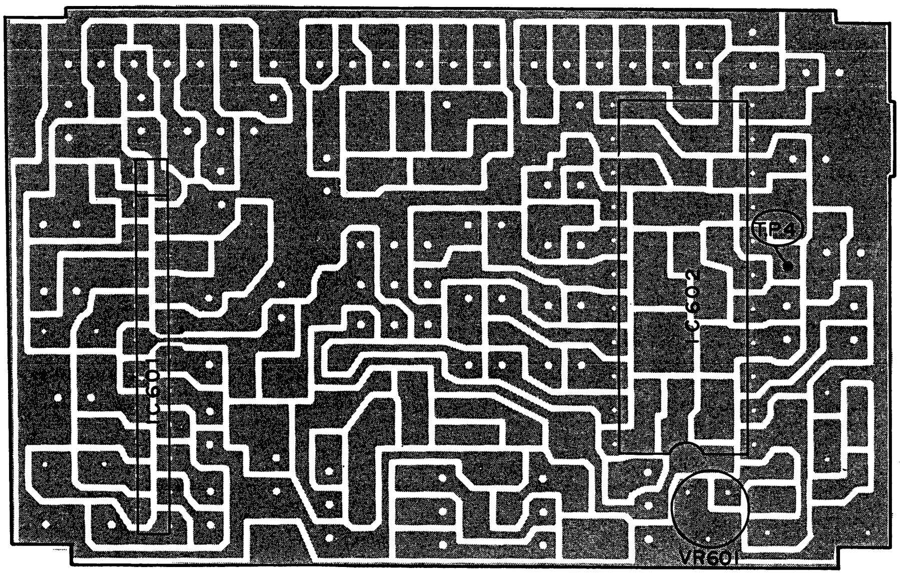
Step	Description	Connection	Test Tape	Adjustment Point	Adjustment
1	Head Azimuth Adjustment	Figure 17	MTT-113C (8 kHz)	Azimuth screw	For maximum output
2	Dolby Level Adjustment	Figure 18	MTT-150	VR301 (L) VR302 (R)	T.P.5(L)Output:450mv±0.5dB T.P.6(R)Output:450mV±0.5dB Dolby:OFF

Adjustment Locations

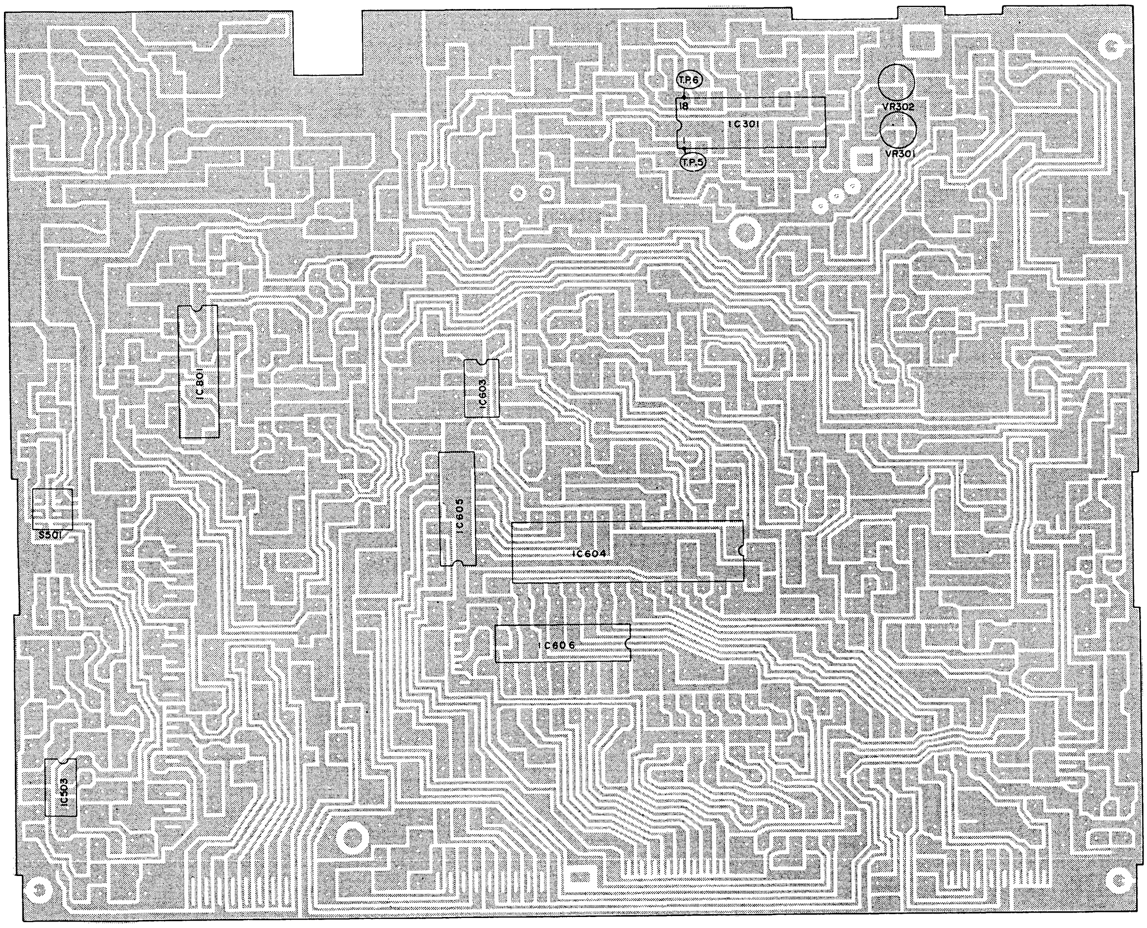

Playback head
Head azimuth adjustment screw


TP3
VR003
VR002
T001
TP2
TP1
IC001
IC003
IC002
VR004
VR001

FM P.C.Board

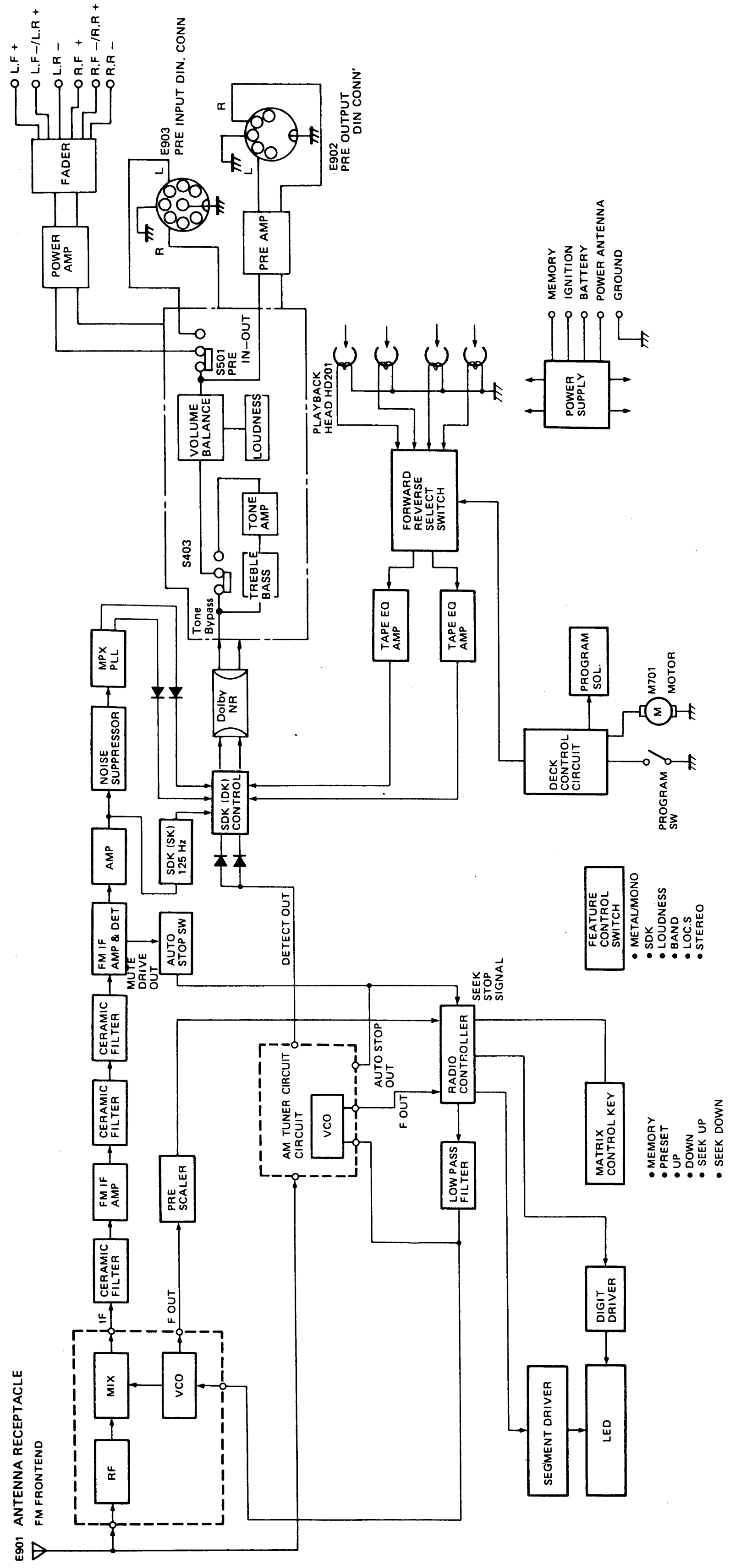

TP4
IC602
IC601
VR601

SDK P.C.Board


T.P.6
18
IC301
VR302
VR301
T.P.5
IC801
IC603
IC605
IC604
S501
IC606
IC503

Main P.C.Board

Block Diagram


E901 ANTENNA RECEPTACLE
FM FRONTEND
RF
MIX
VCO
IF
F OUT
CERAMIC FILTER
FM IF AMP
CERAMIC FILTER
CERAMIC FILTER
FM IF AMP & DET
MUTE DRIVE OUT
AUTO STOP SW
AMP
NOISE SUPPRESSOR
MPX PLL
SDK (SK) 125 Hz
SDK (DK) CONTROL
Dolby NR
Tone Bypass
S403
TREBLE BASS
TONE AMP
VOLUME BALANCE
LOUDNESS
S501 PRE IN—OUT
POWER AMP
FADER
L.F +
L.F –/L.R +
L.R –
R.F +
R.F –/R.R +
R.R –
E903 PRE INPUT DIN. CONN
L
R
PRE AMP
E902 PRE OUTPUT DIN CONN'
PRE SCALER
DETECT OUT
AM TUNER CIRCUIT
CIRCUIT
VCO
AUTO STOP OUT
F OUT
RADIO CONTROLLER
SEEK STOP SIGNAL
LOW PASS FILTER
MATRIX CONTROL KEY
• MEMORY
• PRESET
• UP
• DOWN
• SEEK UP
• SEEK DOWN
DIGIT DRIVER
SEGMENT DRIVER
LED
FEATURE CONTROL SWITCH
• METAL/MONO
• SDK
• LOUDNESS
• BAND
• LOC.S
• STEREO
PLAYBACK HEAD HD201
FORWARD REVERSE SELECT SWITCH
TAPE EQ AMP
TAPE EQ AMP
DECK CONTROL CIRCUIT
PROGRAM SOL.
M701 MOTOR
M
PROGRAM SW
POWER SUPPLY
MEMORY
IGNITION
BATTERY
POWER ANTENNA
GROUND

Parts Layout on P.C. Boards

	Q002	Q101	Q102	Q103	Q301	Q610
B	1.2	5.5	0	0	9.2	0
C	4.5	0	5.5	1.6	13.7	11.7/2
E	0.5	0	0	0	8.5	0

	Q618	Q619	Q801	Q802	Q803	Q805
B	0.8	0.2	9.5	9.6/0.1	2.5/0.1	0/5
C	9.6	4.1	13.3/13.5	13.3/13.5	13.3/13.5	9.5/0.1
E	1.4	0.8	8.9	9.6/0.1	8.9/0	0

	Q601	Q602	Q603	Q604	Q605	Q606	Q607	Q608	Q609
B	6.7	9.4/0.1	0/0.6	0/0.6	3.1	0.7	0.2	0	0/8.7
C	0/0.1	0/0.6	0	0	0	0.2	2.1/0.1	2.1/1.7	9.4/0
E	0/8.7	0	2.0/0	2.0/0	0	0	0	0	0

	Q611	Q612	Q613	Q614	Q615	Q616
B	11.5/1.2	0/6.5	0/10	0.9/0.9	0	5.1/1.7
C	3.7	0.3/0.2	0/1.7	1.3/6.6	6.8	1.9
E	0/1.2	0	0.4/4.1	1.6/0.25	4.2	3.6/8.1

	Q806	Q807
B	0/5	0/5
C	9.6/0.1	9.5
E	0	0

IC601

1	2	3	4	5	6	7	8
8.2	2.1	2.1	0	2.1	1.7	2.2	0.5
9	**10**	**11**	**12**	**13**	**14**	**15**	**16**
3.0	0	6.7	2.9		2.9	0.6	
17	**18**	**19**	**20**	**21**	**22**		
0.4	3.0	3.0	3.0	3.0	4.2		

IC301

1	2	3	4	5	6	7	8	9
4.7	0.7	0.7	4.4	4.3		4.3	4.3	0
10	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
4.3	0	4.3	4.3	0.7	0.7	1	8.6	4.7

IC503

1	2	3	4	5	6	7	8
6	6	6	6	6	6	6	12.4

IC603

1	2	3	4	5	6	7	8
5.0	4.3	0	0	3.9	0.5		

IC604

1	2	3	4	5	6	7
1.5	0	2.6	0.4	2.8	2.4	5.6
8	**9**	**10**	**11**	**12**	**13**	**14**
0	0.5	0.5	0.5	0.5	0.5	5.2
15	**16**	**17**	**18**	**19**	**20**	**21**
1.4	1.7	1.2	1.7	2.6	2.6	3.4
22	**23**	**24**	**25**	**26**	**27**	**28**
0	1.9	1.9	0	2.6	0	5.2

IC605

1	2	3	4	5	6	7
0	0.5	0.5	0.5	0.5	0.5	0
8	**9**	**10**	**11**	**12**	**13**	**14**
	2.5	2.5	2.7	2.7	2.7	

IC606

1	2	3	4	5	6	7	8
3.4	2.6	2.6	1.7	1.2	1.7	1.4	0
9	**10**	**11**	**12**	**13**	**14**	**15**	**16**
4.3	2.6	3.2	2.6	3.1	3.2	3.2	3.4

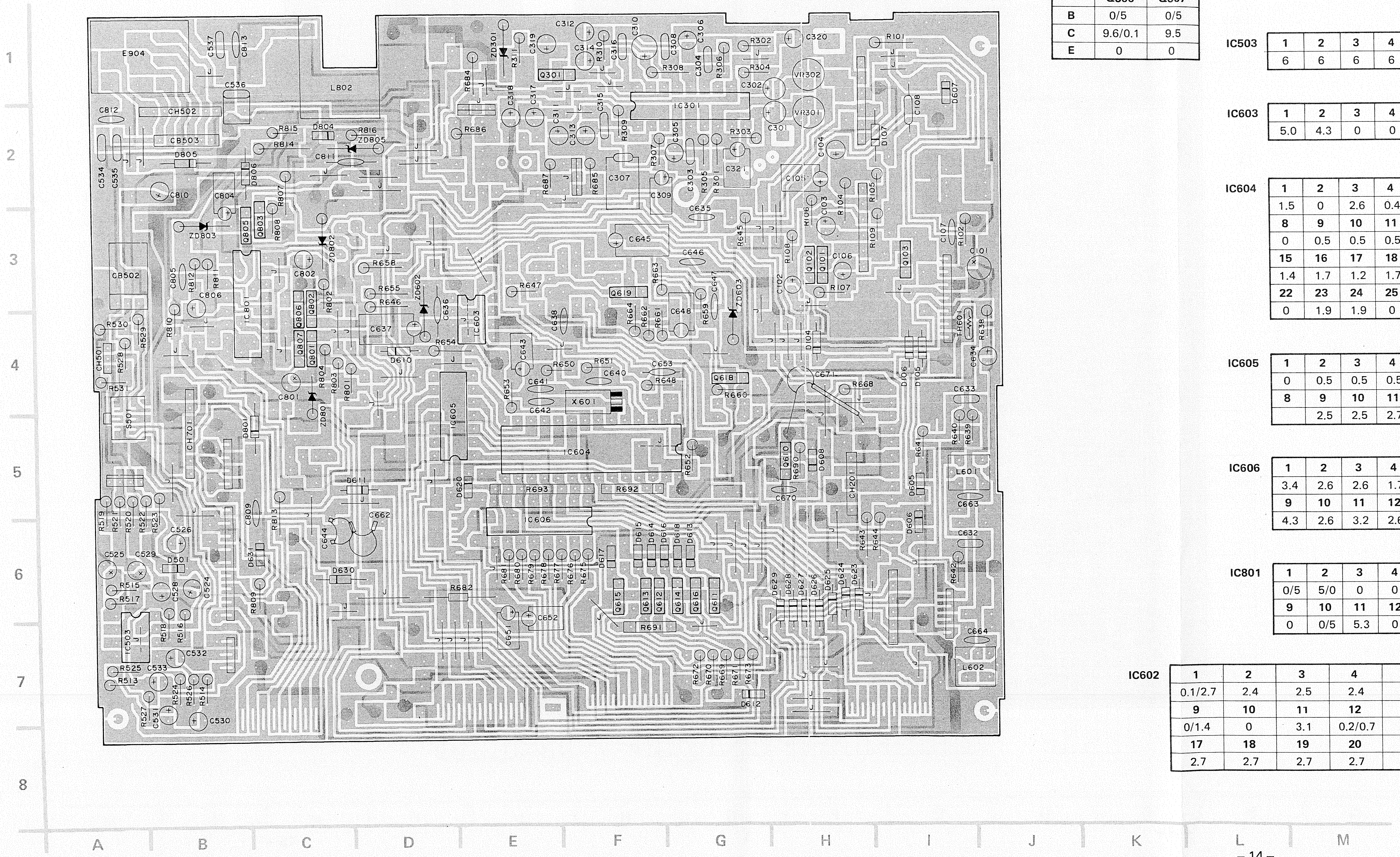
IC801

1	2	3	4	5	6	7	8
0/5	5/0	0	0	5.3	5.3	0	0
9	**10**	**11**	**12**	**13**	**14**	**15**	**16**
0	0/5	5.3	0	0			5.3

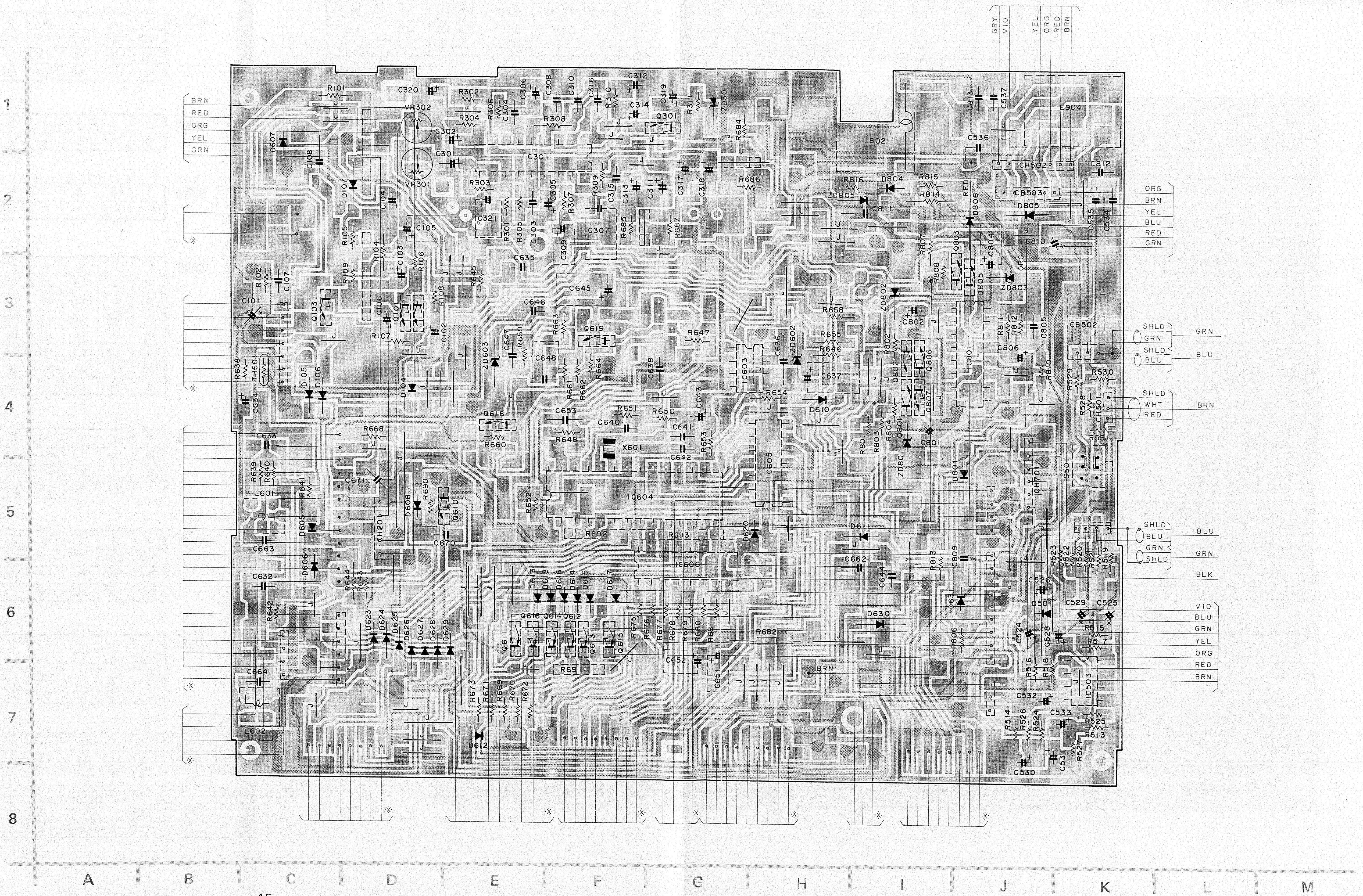
IC602

1	2	3	4	5	6	7	8
0.1/2.7	2.4	2.5	2.4	2.5	0/4.2	0/0.5	0/1.9
9	**10**	**11**	**12**	**13**	**14**	**15**	**16**
0/1.4	0	3.1	0.2/0.7	0	0.8	1.6	1.6
17	**18**	**19**	**20**	**21**	**22**		
2.7	2.7	2.7	2.7	2.0	9.7		

- **Main P.C. Board** (Top View)


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
H
I
J
K
L
M
E904
L802
CH502
CB503
CB502
IC301
IC603
IC604
IC605
IC606
IC503
X601
VR301
VR302
Q301
Q618
Q619
L601
L602
CH201
CH701
CH501

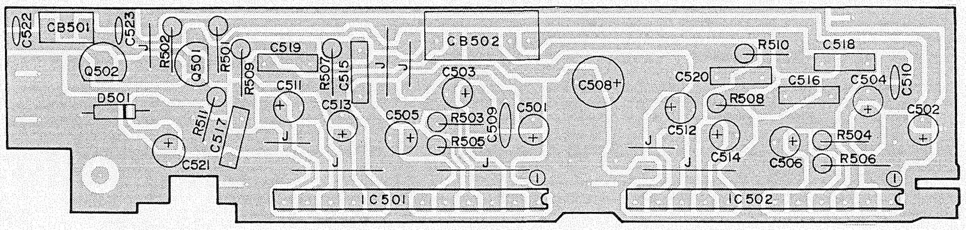
- **Main P.C. Board** (Bottom View)


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
H
I
J
K
L
M
BRN
RED
ORG
YEL
GRN
GRY
VIO
SHLD
WHT
BLU
BLK
IC604
IC605
IC606
IC603
IC503
X601
L802
E904
VR301
VR302

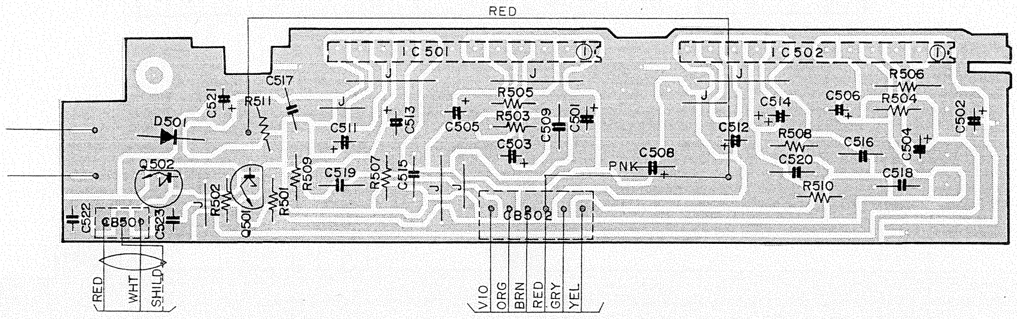
Power-Amp P.C. Board

IC501 502	1	2	3	4	5	6
	3.3		0	3.3	3.3	
	7	**8**	**9**	**10**	**11**	**12**
	0	6.6	12.9	6.6	13.3	12.7

	Q501	Q502
D	12.4	12.4
G	0	0
S	0.7	0.7

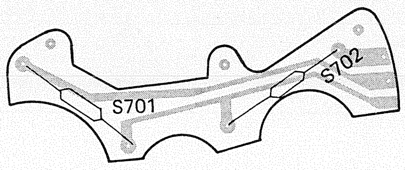

C522
CB501
C523
Q502
R502
Q501
R501
R509
C519
R507
C515
CB502
C511
C513
D501
R511
C517
C521
C503
C505
R503
R505
C509
C501
C508
R510
C518
C520
R508
C516
C504
C510
C502
C512
C514
C506
R504
R506
J
IC501
IC502

Top View

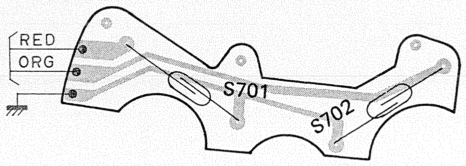

RED
IC501
IC502
J
R506
R504
C506
C514
C517
R511
C521
D501
C511
C513
C505
R505
R503
C509
C501
C503
C512
R508
C520
C516
C504
C502
PNK
C508
R510
C518
Q502
C519
R507
C515
R509
R501
R502
Q501
C522
CB501
C523
CB502
RED
WHT
SHILD
VIO
ORG
BRN
RED
GRY
YEL

Bottom View

Reed Switch P.C. Board



Top View


RED
ORG
S701
S702

Bottom View

• FM P.C. Board

IC001

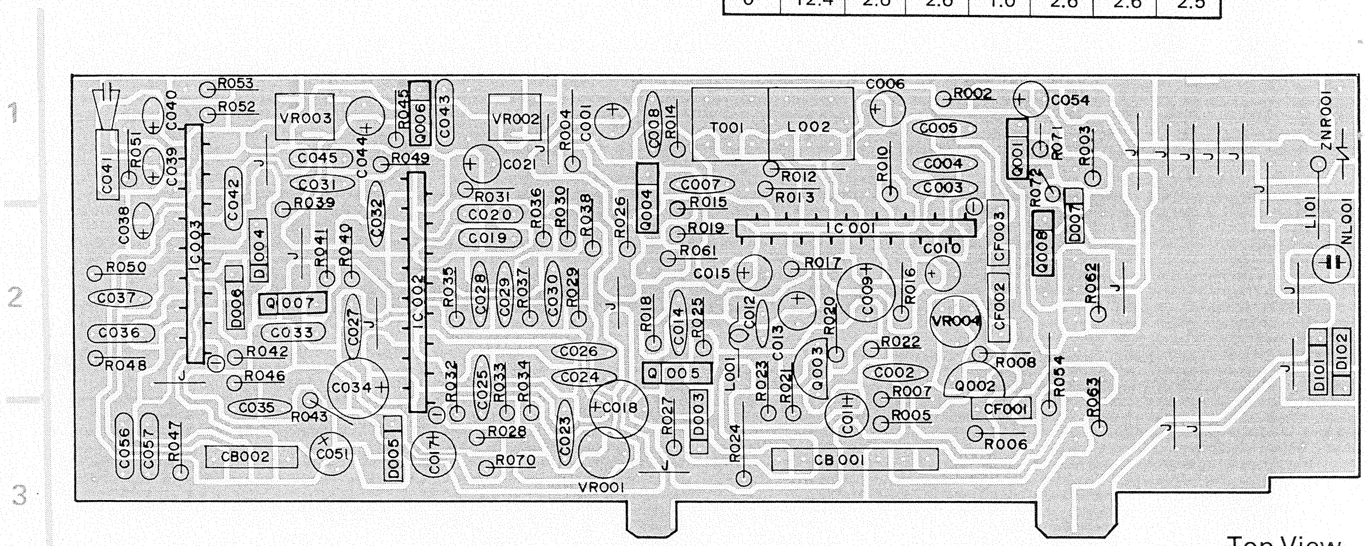
1	2	3	4	5	6	7	8
2.6	2.6	2.0	0	4.9	0	4.8	5.2
9	**10**	**11**	**12**	**13**	**14**	**15**	**16**
4.8	0	4.8	9.0	4.8	0	3.7	3.5

IC002

1	2	3	4	5	6	7	8
8.3	3.4	4.6	4.6	4.1	4.1	4.7	0
9	**10**	**11**	**12**	**13**	**14**	**15**	**16**
1.7	3.0		2.3	0	0	4.5	4.5

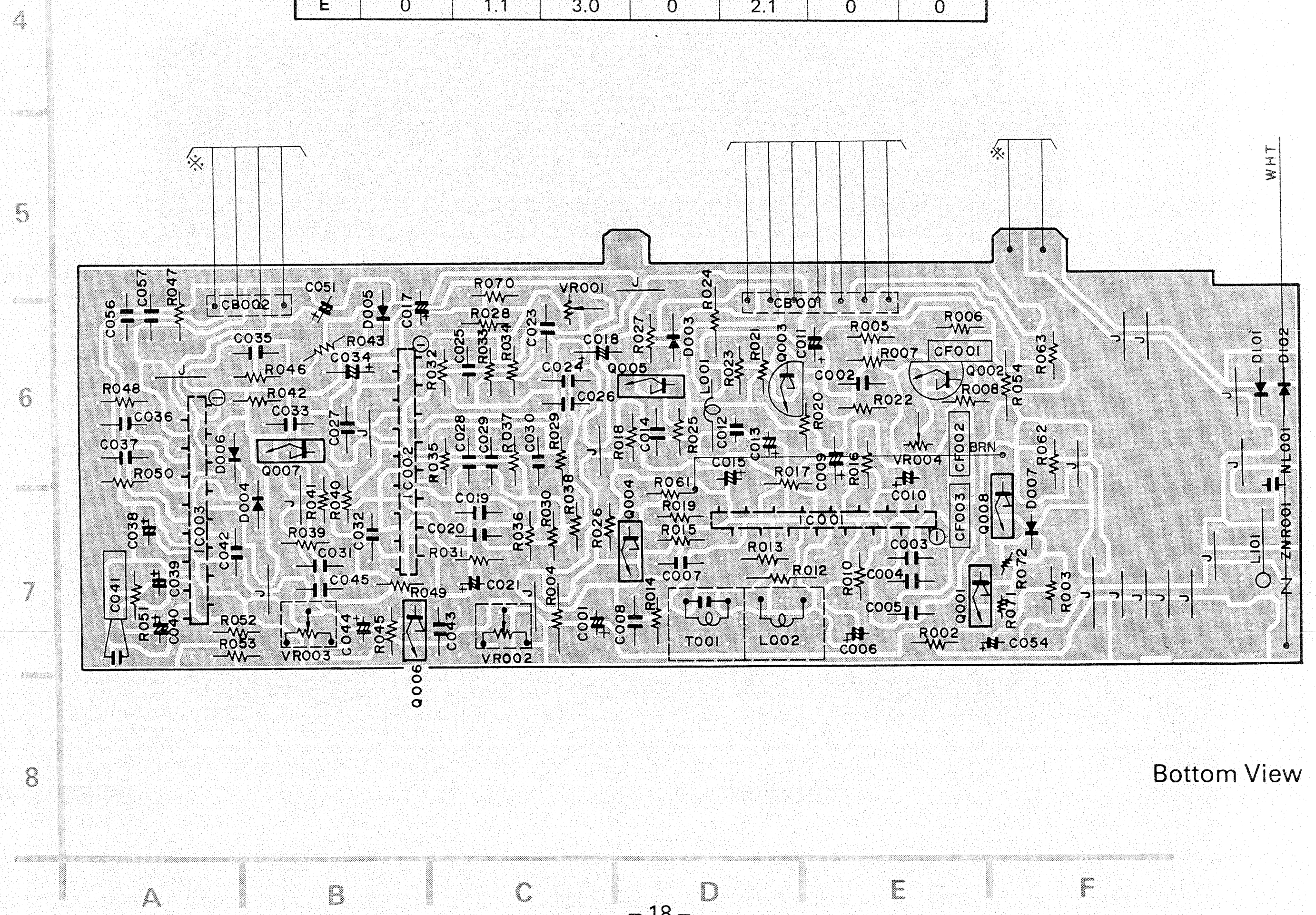
IC003

1	2	3	4	5	6	7	8
8.5	3.2	3.3	2.0	4.0	4.0	2.1	1.3
9	**10**	**11**	**12**	**13**	**14**	**15**	**16**
0	12.4	2.6	2.6	1.0	2.6	2.6	2.5


1
2
3
VR003
VR002
T001
L002
IC001
IC002
IC003
Q001
Q002
Q003
Q004
Q005
Q006
Q007
Q008
CF001
CF002
CF003
CB001
CB002
VR001
VR004
L001
L101
NL001
ZNR001
D101
D102

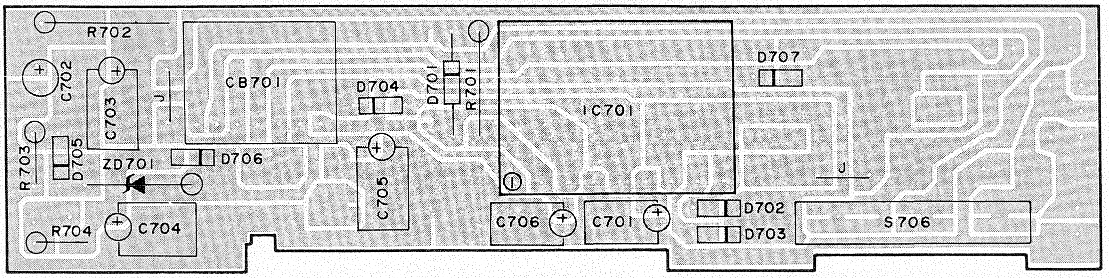
Top View

	Q001	Q003	Q004	Q005	Q006	Q007	Q008
B	0	1.7	3.4	0	2.1	0	0.6
C	4.7	3.8	8.9	6.2	0	2.1	0.1
E	0	1.1	3.0	0	2.1	0	0


4
5
6
7
8
WHT
BRN
CB001
CB002
IC001
IC002
IC003
T001
L002
VR001
VR002
VR003
VR004
Q001
Q002
Q003
Q004
Q005
Q006
Q007
Q008
CF001
CF002
CF003
D101
D102
NL001
ZNR001
L101
A
B
C
D
E
F

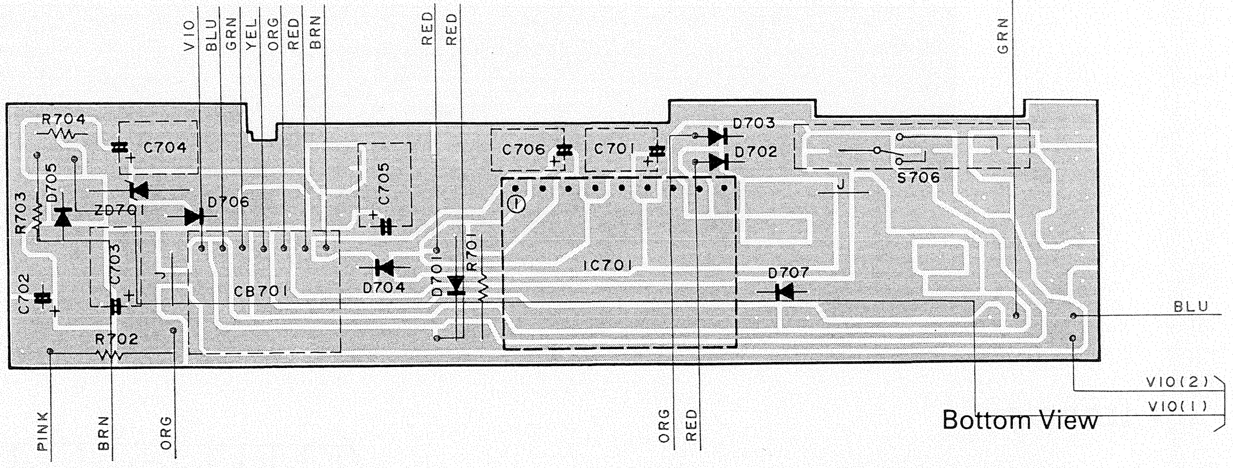
Bottom View

Reverse P.C. Board

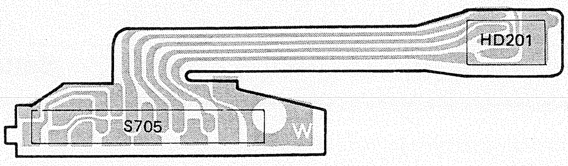

R702
C702
C703
J
CB701
D704
D701
R701
IC701
D707
R703
D705
ZD701
D706
C705
J
R704
C704
C706
C701
D702
D703
S706

IC701	1	2	3	4	5	6	7	8	9
	12.2	12.2	13.8	0	0	6.3	13.8		

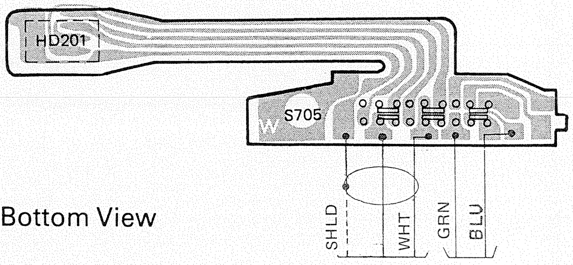
Top View


VIO
BLU
GRN
YEL
ORG
RED
BRN
RED
RED
GRN
R704
C704
D703
C706
C701
D702
S706
J
D705
R703
ZD701
D706
C705
D701
R701
C703
IC701
D707
C702
CB701
D704
R702
BLU
VIO(2)
VIO(1)
PINK
BRN
ORG
ORG
RED

Bottom View


HD201
S705
W

Top View


HD201
S705
W
SHLD
WHT
GRN
BLU

Bottom View

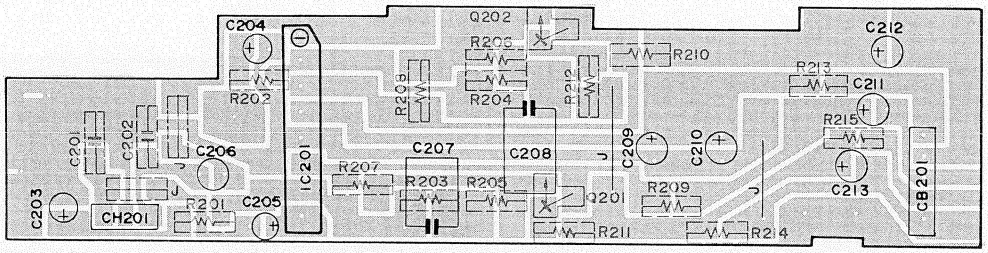
1
2
3
4
5
6
7
8

A B C D E F

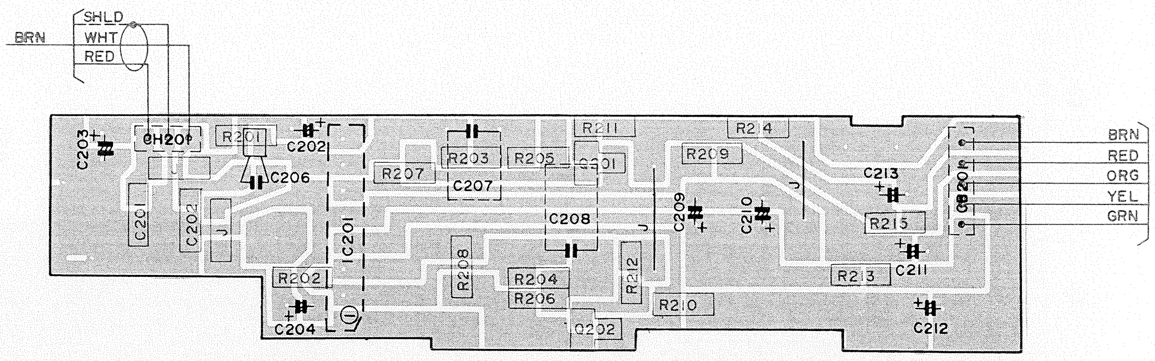
Pre-Amp P.C. Board

IC201	1	2	3	4	5	6	7	8
	1.1	0.7	2.7	8.9	0	2.7	0.7	1.1

	Q201	Q202
B	0/3.2	0/3.2
C	2.7	2.7
E	2.7	2.7

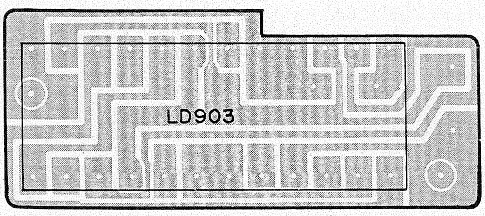

C204
Q202
R206
R210
C212
R202
R208
R204
R212
R213
C211
R215
C201
C202
C206
IC201
C207
C208
C209
C210
C213
CB201
C203
CH201
R201
C205
R207
R203
R205
Q201
R209
R211
R214

Top View

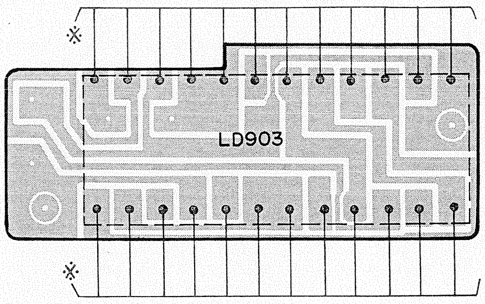

BRN
SHLD
WHT
RED
C203
CH201
R201
C202
C206
R211
R214
R203
R205
Q201
R209
R207
C207
C213
CB201
C201
C202
IC201
C208
C209
C210
R215
R208
R212
R202
R204
R206
R213
C211
R210
C204
Q202
C212
BRN
RED
ORG
YEL
GRN

Bottom View

LED P.C. Board



Top View

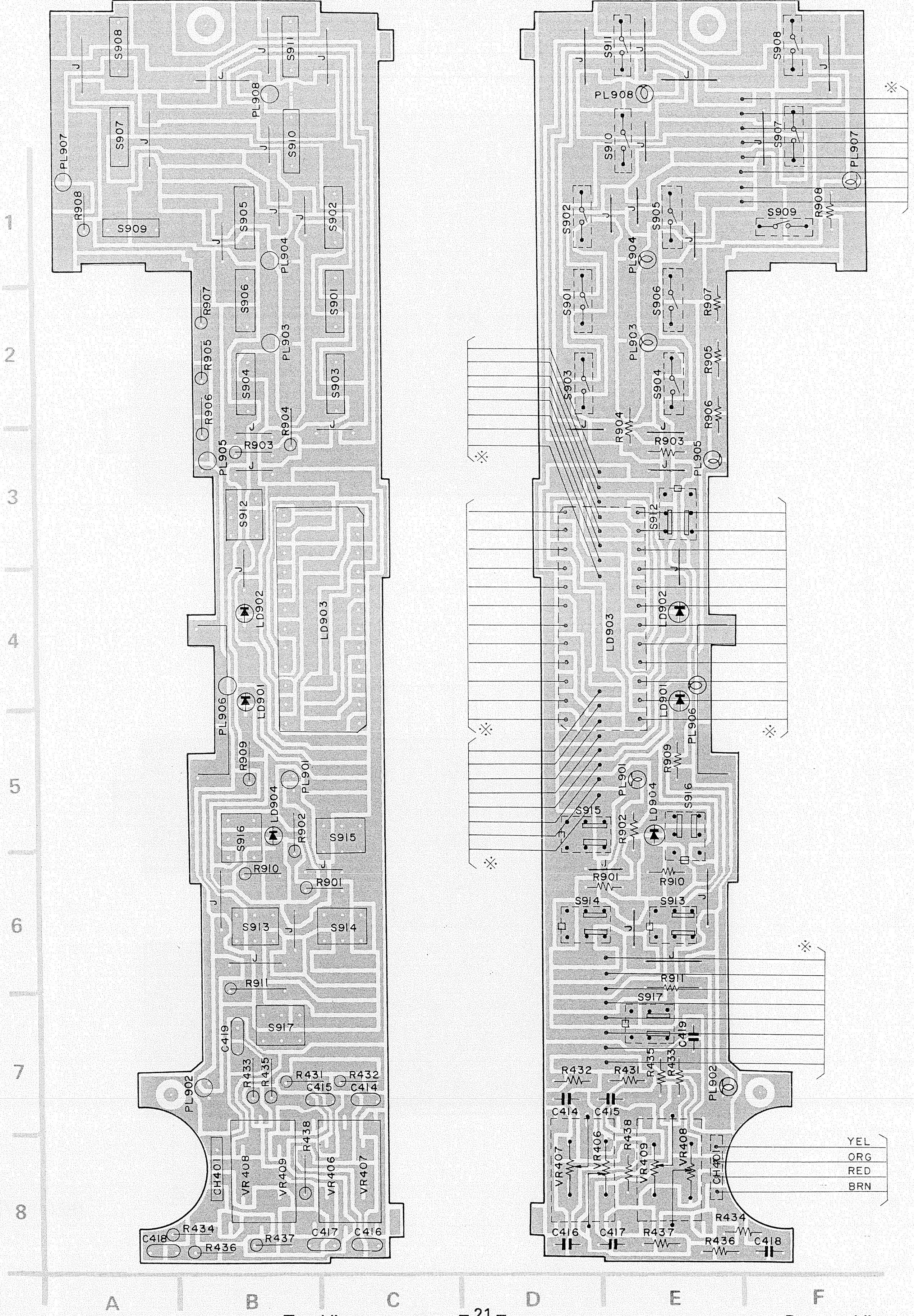


Bottom View

1
2
3
4
5
6
7
8

A B C D E F

Display P.C. Board


S908
S911
PL908
S907
S910
PL907
R908
S909
S905
S902
PL904
R907
S906
S901
R905
PL903
S904
S903
R906
R904
R903
PL905
S912
LD902
LD903
PL906
LD901
R909
PL901
LD904
R902
S916
S915
R910
R901
S913
S914
R911
S917
C419
R433
R435
R431
R432
C415
C414
PL902
R438
CH401
VR408
VR409
VR406
VR407
C418
R434
R436
R437
C417
C416
J
※
YEL
ORG
RED
BRN
1
2
3
4
5
6
7
8
A
B
C
D
E
F

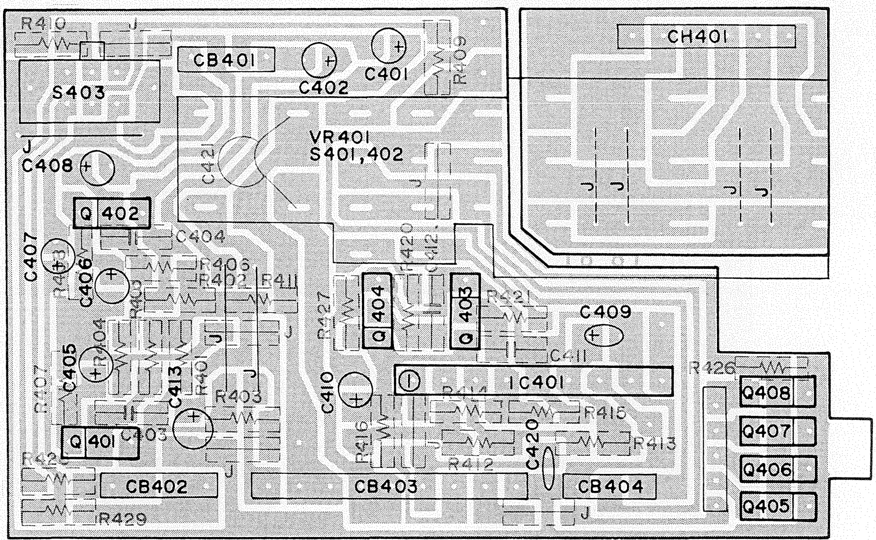
Top View

Bottom View

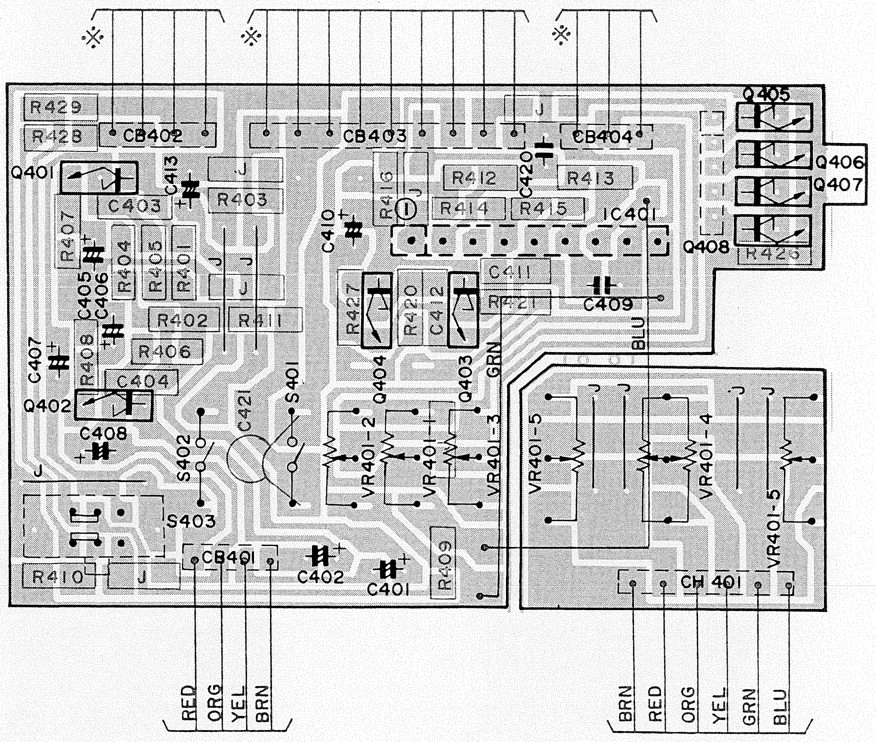
IC401	1	2	3	4	5	6	7	8	9
	1.4	3.4		1.3	0	2.7	0	0	0

- **Volume P.C. Board**

	Q401	Q402	Q403	Q404	Q405	Q406	Q407	Q408
B	1.9	1.9	4.1/0	4.1/0	0.7/0.3	0.7/0.3	0.7/0.3	0.7/0.3
C	4.1	4.1	0	0	0	0	0	0
E	1.3	1.3	0	0	0	0	0	0


R410
S403
CB401
C402
C401
R409
CH401
VR401
S401,402
C421
C408
Q402
C404
C407
R413
C406
R406
R402
R411
R420
C412
R427
Q404
Q403
R421
C409
C411
R404
C405
C413
R401
R407
R403
C410
IC401
R414
R426
R415
Q408
Q407
Q406
Q405
Q401
C403
R416
R412
C420
R428
CB402
CB403
CB404
R429
J

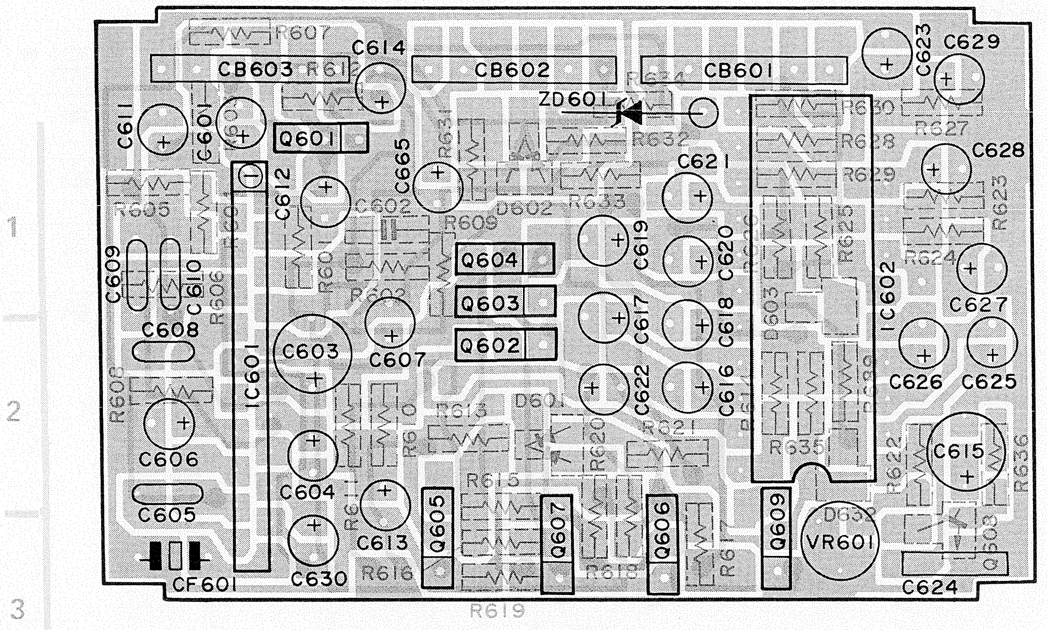
Top View


※
R429
CB402
R428
CB403
CB404
Q405
Q406
Q407
Q401
C413
C403
R403
C410
R416
R412
C420
R413
R414
R415
IC401
R407
R404
R405
R401
Q408
R426
C405
C406
R402
R411
R427
R420
C412
C411
R421
C409
C407
R408
R406
Q404
Q403
GRN
BLU
Q402
C404
C421
S401
S402
VR401-2
VR401-1
VR401-3
VR401-5
VR401-4
C408
S403
R410
CB401
C402
C401
R409
CH 401
J
RED
ORG
YEL
BRN
BRN
RED
ORG
YEL
GRN
BLU

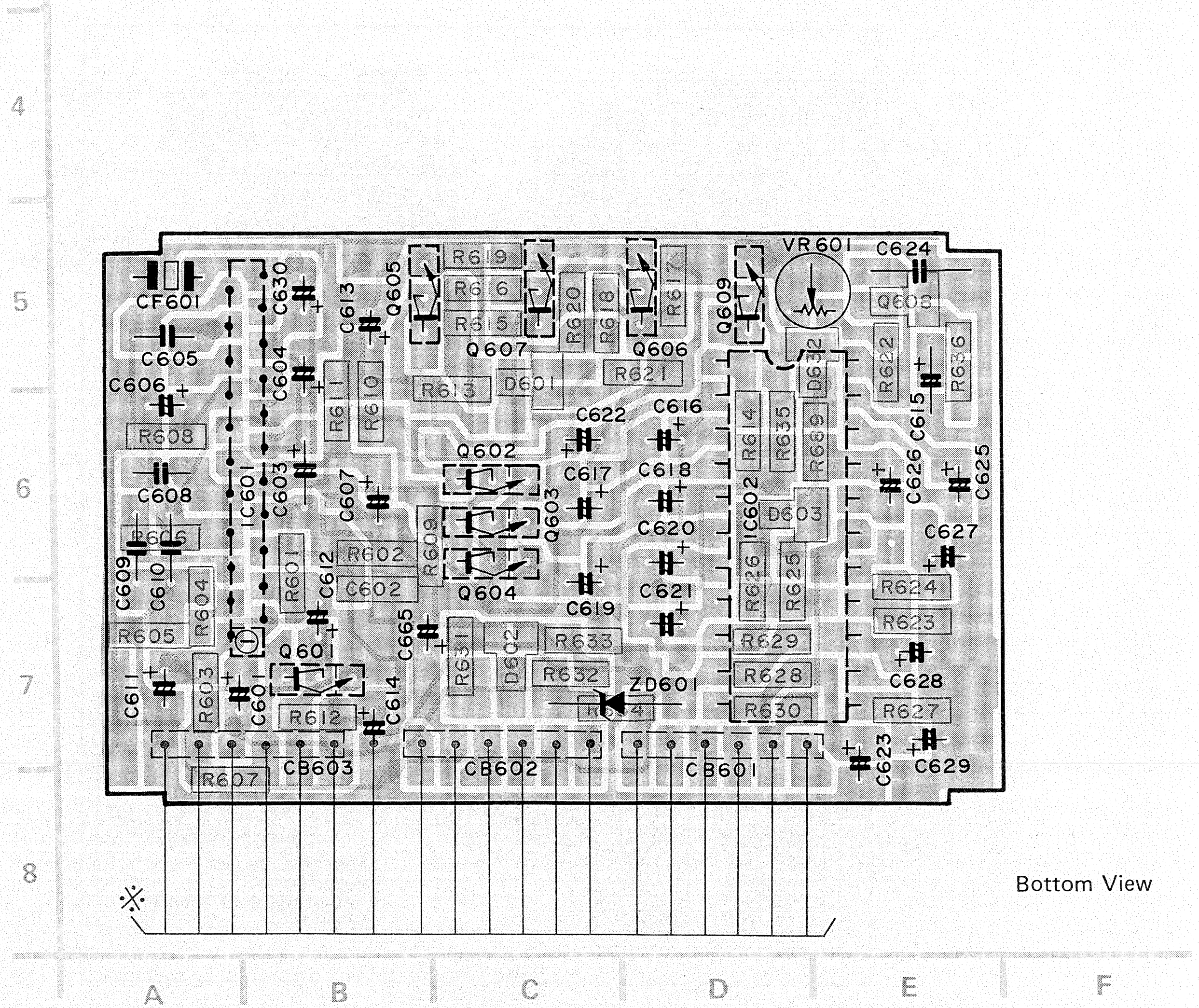
Bottom View

1
2
3
4
5
6
7
8
A
B
C
D
E
F

- **SDK P.C. Board**


1
2
3
R607
C614
CB603
R612
CB602
CB601
C623
C629
ZD601
R634
R630
R627
R628
C628
R629
R632
C611
C601
Q601
C665
R631
D602
R633
C621
R623
C612
C602
R609
C619
R605
Q604
C620
R625
R624
C609
C610
R606
R602
Q603
C617
C618
D603
IC602
C627
C608
C603
C607
Q602
C626
C625
R608
IC601
R613
D601
C622
C616
R614
R635
C606
R610
R620
R621
C615
R636
C604
R615
R622
C605
C613
Q605
Q607
Q606
Q609
D632
VR601
CF601
C630
R616
R618
R617
C624
R619

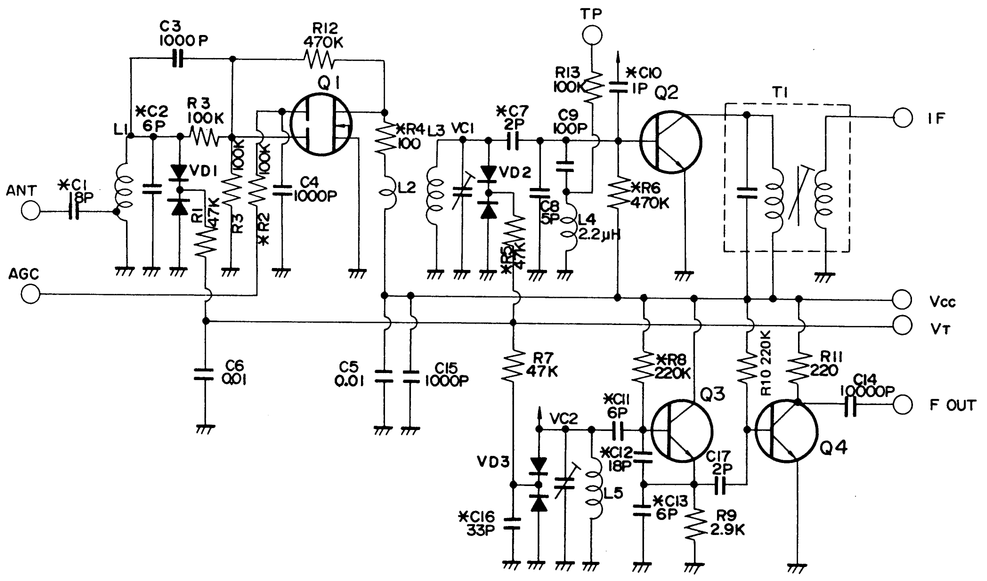
Top View


4
5
6
7
8
VR601
C624
R619
CF601
C630
R616
Q605
C613
R620
R618
R617
Q609
Q608
C605
Q607
Q606
C604
R615
C606
R611
R610
R613
D601
R621
D632
R622
R636
R608
C622
C616
R614
R635
R689
C615
Q602
C617
C618
C626
C625
C608
C603
C607
IC601
Q603
D603
C620
IC602
C627
R606
R602
R609
C609
C610
R601
C612
C602
Q604
C619
C621
R626
R625
R624
R604
R623
R605
C665
R633
R629
C611
R603
Q601
R631
D602
R632
ZD601
R628
C628
C601
R612
C614
R634
R630
R627
C623
C629
R607
CB603
CB602
CB601
※
A
B
C
D
E
F

Bottom View

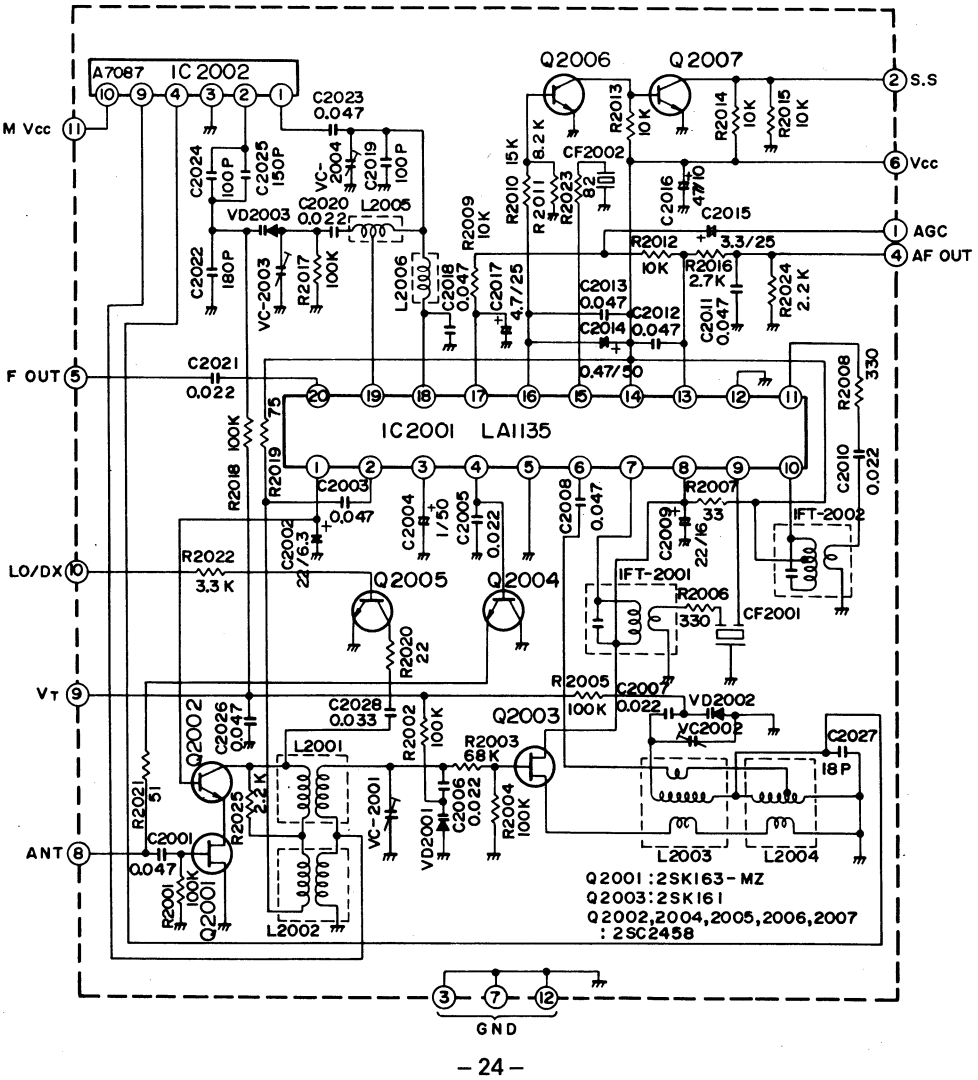
Tuner Schematic Diagram

• FM Tuner (BFE151U12)


TP
C3
1000P
R12
470K
Q1
*C2
6P
R3
100K
L1
ANT
*C1
8P
VD1
R1
47K
R3
*R2
100K
100K
C4
1000P
*R4
100
L3
VC1
*C7
2P
C9
100P
R13
100K
*C10
1P
Q2
VD2
C8
5P
L4
2.2µH
*R6
470K
*R5
47K
L2
T1
IF
AGC
Vcc
VT
C6
0.01
C5
0.01
C15
1000P
R7
47K
*R8
220K
R10 220K
R11
220
C14
10000P
F OUT
*C11
6P
Q3
Q4
VC2
*C12
18P
VD3
C17
2P
L5
*C13
6P
R9
2.9K
*C16
33P

VD1 to VD2	SVC211, 1SV55 1SV103
Q1	3SK85, 3SK101 3SK114
Q2	2SC2668 or equivalent
Q3	2SC2839 or equivalent
Q4	2SC2839 or equivalent

• MW/LW Tuner (TR6AP210)


A7087
IC2002
M Vcc
C2023
0.047
C2024
100P
C2025
150P
VC-2004
C2019
100P
C2020
0.022
L2005
VD2003
C2022
180P
VC-2003
R2017
100K
L2006
C2018
0.047
R2009
10K
C2017
4.7/25
R2010 15K
8.2K
R2011
R2023
82
CF2002
R2013
10K
Q2006
Q2007
R2014
10K
R2015
10K
S.S
Vcc
C2016
47/10
C2015
3.3/25
AGC
AF OUT
R2012
10K
R2016
2.7K
R2024
2.2K
C2013
0.047
C2012
0.047
C2014
0.47/50
C2011
0.047
F OUT
C2021
0.022
IC2001 LA1135
R2018
100K
R2019
75
R2008
330
C2010
0.022
C2003
0.047
C2002
22/6.3
C2004
1/50
C2005
0.022
C2008
0.047
C2009
22/16
R2007
33
IFT-2002
IFT-2001
R2006
330
CF2001
LO/DX
R2022
3.3K
Q2005
Q2004
R2020
22
VT
R2005
100K
C2007
0.022
VD2002
VC2002
C2027
18P
Q2002
C2026
0.047
C2028
0.033
R2002
100K
Q2003
R2003
68K
L2001
R2021
51
R2025
2.2K
VC-2001
VD2001
C2006
0.022
R2004
100K
ANT
C2001
0.047
R2001
100K
Q2001
L2002
L2003
L2004
GND
Q2001 : 2SK163-MZ
Q2003 : 2SK161
Q2002,2004,2005,2006,2007
: 2SC2458

Schematic Diagram

ICs	IC201 IC701 IC001 IC301 IC002 IC601 IC602 IC003
Transistors	Q001 Q008 Q002 Q201 Q202 Q003 Q004 Q005 Q101- Q103 Q605-Q607 Q006 Q007 Q608 Q601-Q604
Diodes	D101 D102 ZNR001 D007 D701-D707 ZD701 D003 D104-D107 D630 D605-D606 D632 D004 D005 D603 D602 D006 ZD301 ZD601

	Q001	Q002	Q003	Q004	Q005	Q006	Q007	Q008	Q101	Q102	Q103	Q201	Q202	Q301	Q401	Q402	Q403	Q404	Q405	Q406
B	0	1.2	1.7	3.4	0	2.1	0	0.6	5.5	0	0	0/3.2	0/3.2	9.2	1.9	1.9	4.1/0	4.1/0	0.7/0.3	0.7/0.3
C	4.7	4.5	3.8	8.9	6.2	0	2.1	0.1	0	5.5	1.6	2.7	2.7	13.7	4.1	4.1	0	0	0	0
E	0	0.5	1.1	3.0	0	2.1	0	0	0	0	0	2.7	2.7	8.5	1.3	1.3	0	0	0	0

IC201

1	2	3	4	5	6	7	8
1.1	0.7	2.7	8.9	0	2.7	0.7	1.1

IC301

1	2	3	4	5	6	7	8	9
4.7	0.7	0.7	4.4	4.3		4.3	4.3	0
10	11	12	13	14	15	16	17	18
4.3	0	4.3	4.3	0.7	0.7	1	8.6	4.7

IC501
502

1	2	3	4	5	6
3.3		0	3.3	3.3	
7	8	9	10	11	12
0	6.6	12.9	6.6	13.3	12.7

IC503

1	2	3	4	5	6	7	8
6	6	6	0	6	6	6	12.4

IC401

1	2	3	4	5	6	7	8	9
1.4	3.4		1.3	0	2.7	0	0	0

IC601

1	2	3	4	5	6	7	8
8.2	2.1	2.1	0	2.1	1.7	2.2	0.5
9	10	11	12	13	14	15	16
3.0	0	6.7	2.9		2.9	0.6	
17	18	19	20	21	22		
0.4	3.0	3.0	3.0	3.0	4.2		

IC602

1	2	3	4	5	6	7	8
0.1/2.7	2.4	2.5	2.4	2.5	0/4.2	0/0.5	0/1.9
9	10	11	12	13	14	15	16
0/1.4	0	3.1	0.2/0.7	0	0.8	1.6	1.6
17	18	19	20	21	22		
2.7	2.7	2.7	2.7	2.0	9.7		

IC603

1	2	3	4	5	6	7	8
5.0	4.3	0	0	3.9	0.5		

IC604

1	2	3	4	5	6	7
1.5	0	2.6	0.4	2.8	2.4	5.6
8	9	10	11	12	13	14
0	0.5	0.5	0.5	0.5	0.5	5.2
15	16	17	18	19	20	21
1.4	1.7	1.2	1.7	2.6	2.6	3.4
22	23	24	25	26	27	28
0	1.9	1.9	0	2.6	0	5.2

IC605

1	2	3	4	5	6	7
0	0.5	0.5	0.5	0.5	0.5	0
8	9	10	11	12	13	14
	2.5	2.5	2.7	2.7	2.7	

IC606

1	2	3	4	5	6	7	8
3.4	2.6	2.6	1.7	1.2	1.7	1.4	0
9	10	11	12	13	14	15	16
4.3	2.6	3.2	2.6	3.1	3.2	3.2	3.4

IC001

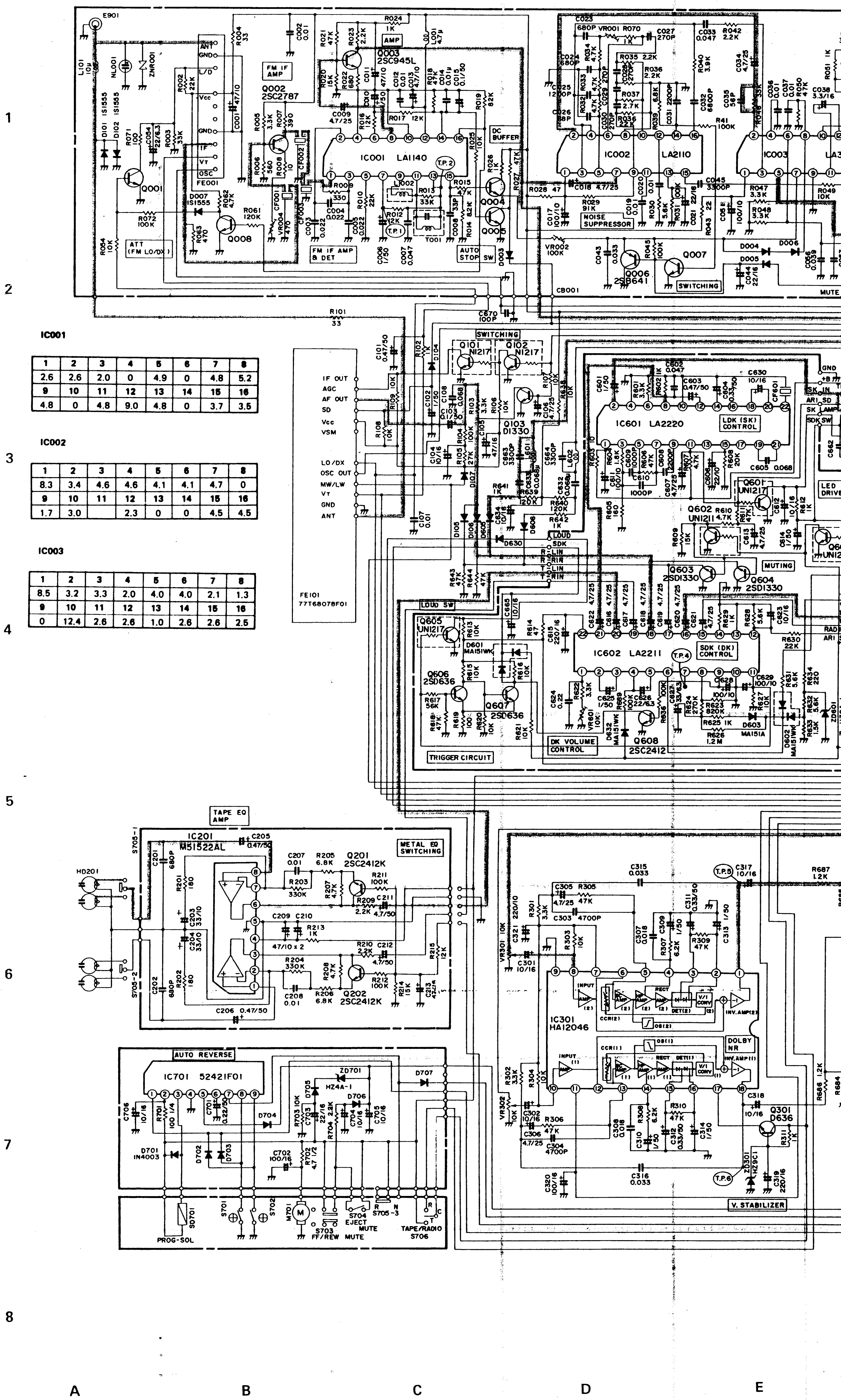
1	2	3	4	5	6	7	8
2.6	2.6	2.0	0	4.9	0	4.8	5.2
9	10	11	12	13	14	15	16
4.8	0	4.8	9.0	4.8	0	3.7	3.5

IC002

1	2	3	4	5	6	7	8
8.3	3.4	4.6	4.6	4.1	4.1	4.7	0
9	10	11	12	13	14	15	16
1.7	3.0		2.3	0	0	4.5	4.5

IC003

1	2	3	4	5	6	7	8
8.5	3.2	3.3	2.0	4.0	4.0	2.1	1.3
9	10	11	12	13	14	15	16
0	12.4	2.6	2.6	1.0	2.6	2.6	2.5


1
2
3
4
5
6
7
8
A
B
C
D
E
E901
L101 10µ
ANT
GND
L/D
Vcc
IF
VT
OSC
FE001
AMP
Q003 2SC945L
FM IF AMP
Q002 2SC2787
IC001 LA1140
DC BUFFER
T.P.2
T.P.1
T001
Q004
Q005
AUTO STOP SW
ATT (FM LO/DX)
Q001
Q008
D007 1S1555
FM IF AMP & DET
IC002 LA2110
NOISE SUPPRESSOR
Q006 2SB641
Q007
SWITCHING
IC003
MUTE
CB001
R101 33
C670 100P
SWITCHING
Q101 NI217
Q102 NI217
Q103 DI330
IF OUT
AGC
AF OUT
SD
Vcc
VSM
LO/DX
OSC OUT
MW/LW
VT
GND
ANT
FE101 77T68078F01
IC601 LA2220
LDK (SK) CONTROL
Q601 UN1217
Q602 UN1211
LOUD
SDK
MUTING
Q603 2SD1330
Q604 2SD1330
LOUD SW
Q605 UN1217
D601 MA151WK
Q606 2SD636
Q607 2SD636
IC602 LA2211
T.P.4
SDK (DK) CONTROL
DK VOLUME CONTROL
D632 MA151WK
Q608 2SC2412
TRIGGER CIRCUIT
D603 MA151A
LED DRIVE
TAPE EQ AMP
IC201 M51522AL
METAL EQ SWITCHING
Q201 2SC2412K
Q202 2SC2412K
HD201
S705-1
S705-2
AUTO REVERSE
IC701 5242IF01
ZD701 HZ4A-1
D701 IN4003
SD701
PROG-SOL
S701
S702
M701
S703 FF/REW
S704 EJECT
MUTE
S705-3
TAPE/RADIO S706
IC301 HA12046
DOLBY NR
T.P.5
T.P.6
Q301 D636
V. STABILIZER
VR301 10K
VR302 10K

NOTES:
1. Diodes with description omitted are diode MA165TA or equivalent.
2. Transistors with description omitted are transistor 2SD636 or equivalent.

UNLESS OTHERWISE SPECIFIED,
1. ALL RESISTANCE VALUES ARE IN OHMS K=1,000 M=1,000,000
2. ALL RESISTORS ARE RATED AT ⅛ WATT, 5%
3. ALL CAPACITANCE VALUES ARE IN MICRO-FARAD (µF)·P=10⁻⁶µF
4. ALL CAPACITORS ARE RATED AT 500WV

IC801

1	2	3	4	5	6	7	8
0/5	5/0	0	0	5.3	5.3	0	0
9	10	11	12	13	14	15	16
0	0/5	5.3	0	0			5.3

IC701

1
12.2

IC301 IC002 IC601 IC602 IC003 IC603 IC401 IC604 IC503 IC606 IC605 IC801

004 Q005 Q006 Q007 Q601-Q604 Q609 Q610 Q618 Q619 Q611-Q616

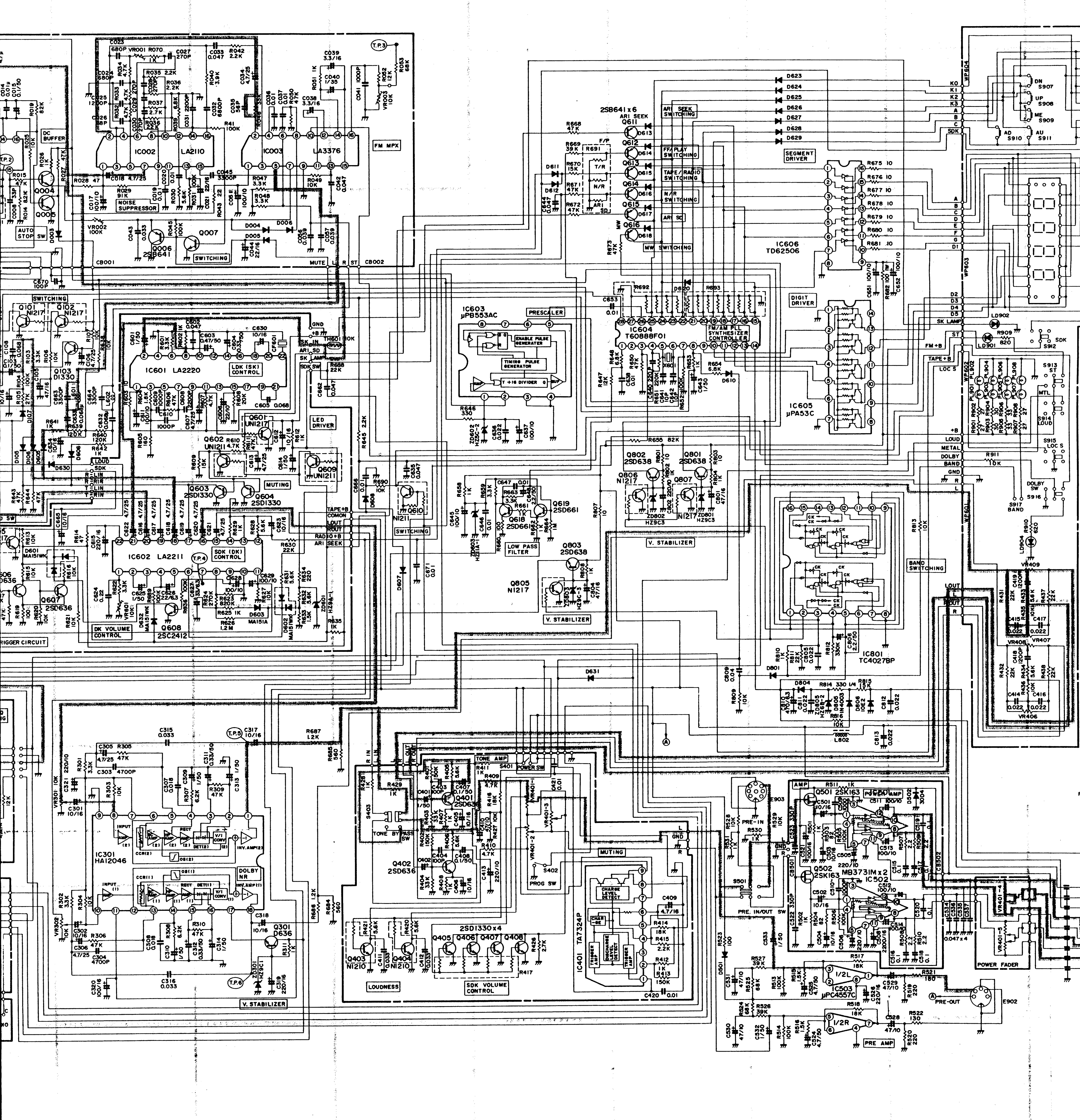
101- Q103 Q605-Q607 Q608 Q301 Q401-Q408 Q803 Q805 Q801 Q802 Q806 Q807 Q501 Q502

D003 D630 D004 D005 D006 D608 ZD602 ZD603 D611 D612 D613-D618 D613 — D618 D610 D623—D629 D502 LD901

4-D107 D605-D606 D632 D603 D602 ZD301 ZD601 D607 ZD803 HZ9C-3 D631 ZD802 ZD601 D620 D501 D801 D801 D805 D806 D501 HZ6B-2

3	Q201	Q202	Q301	Q401	Q402	Q403	Q404	Q405	Q406	Q407	Q408	Q601
	0/3.2	0/3.2	9.2	1.9	1.9	4.1/0	4.1/0	0.7/0.3	0.7/0.3	0.7/0.3	0.7/0.3	6.7
	2.7	2.7	13.7	4.1	4.1	0	0	0	0	0	0	0/0.1
	2.7	2.7	8.5	1.3	1.3	0	0	0	0	0	0	0/8.7

Q602	Q603	Q604	Q605	Q606	Q607	Q608	Q609	Q610	Q611	Q612	Q613	Q614	Q615	Q616	Q618	Q619	Q801	Q80
9.4/0.1	0/0.6	0/0.6	3.1	0.7	0.2	0	0/8.7	0	11.5/1.2	0/6.5	0/10	0.9/0.9	0	5.1/1.7	0.8	0.2	9.5	9.6/0
0/0.6	0	0	0	0.2	2.1/0.1	2.1/1.7	9.4/0	11.7/2	3.7	0.3/0.2	0/1.7	1.3/6.6	6.8	1.9	9.6	4.1	13.3/13.5	13.3/1
0	2.0/0	2.0/0	0	0	0	0	0	0	0/1.2	0	0.4/4.1	1.6/0.25	4.2	3.6/8.1	1.4	0.8	8.9	9.6/0



IC002 LA2110
NOISE SUPPRESSOR
IC003 LA3376
FM MPX
DC BUFFER
AUTO STOP SW
SWITCHING
IC601 LA2220
LDK (SK) CONTROL
LED DRIVER
MUTING
IC602 LA2211
SDK (DK) CONTROL
DK VOLUME CONTROL
TRIGGER CIRCUIT
IC603 µPB553AC
PRESCALER
ENABLE PULSE GENERATOR
TIMING PULSE GENERATOR
T ÷16 DIVIDER
LOW PASS FILTER
V. STABILIZER
IC604 T60888F01
FM/AM PLL SYNTHESIZER CONTROLLER
ARI SEEK SWITCHING
FF/PLAY SWITCHING
TAPE/RADIO SWITCHING
N/R SWITCHING
MW SWITCHING
2SB641 x 6
SEGMENT DRIVER
IC606 TD62506
DIGIT DRIVER
IC605 µPA53C
IC801 TC4027BP
BAND SWITCHING
IC301 HA12046
DOLBY NR
TONE AMP
POWER SW
TONE BY PASS SW
PROG SW
LOUDNESS
2SD1330 x 4
SDK VOLUME CONTROL
MUTING
IC401 TA7324P
PRE IN/OUT SW
PRE-IN
PRE-OUT
E902
E903
IC502 M83731M x 2
POWER AMP
IC503 µPC4557C
PRE AMP
POWER FADER
D
E
F
G
H
I
J

IC701	1	2	3	4	5	6	7	8	9
	12.2	12.2	13.8	0	0	6.3	13.8		

IC603 IC401 IC604 IC503 IC606 IC605 IC801

Q609 Q610 Q618 Q619 Q611-Q616

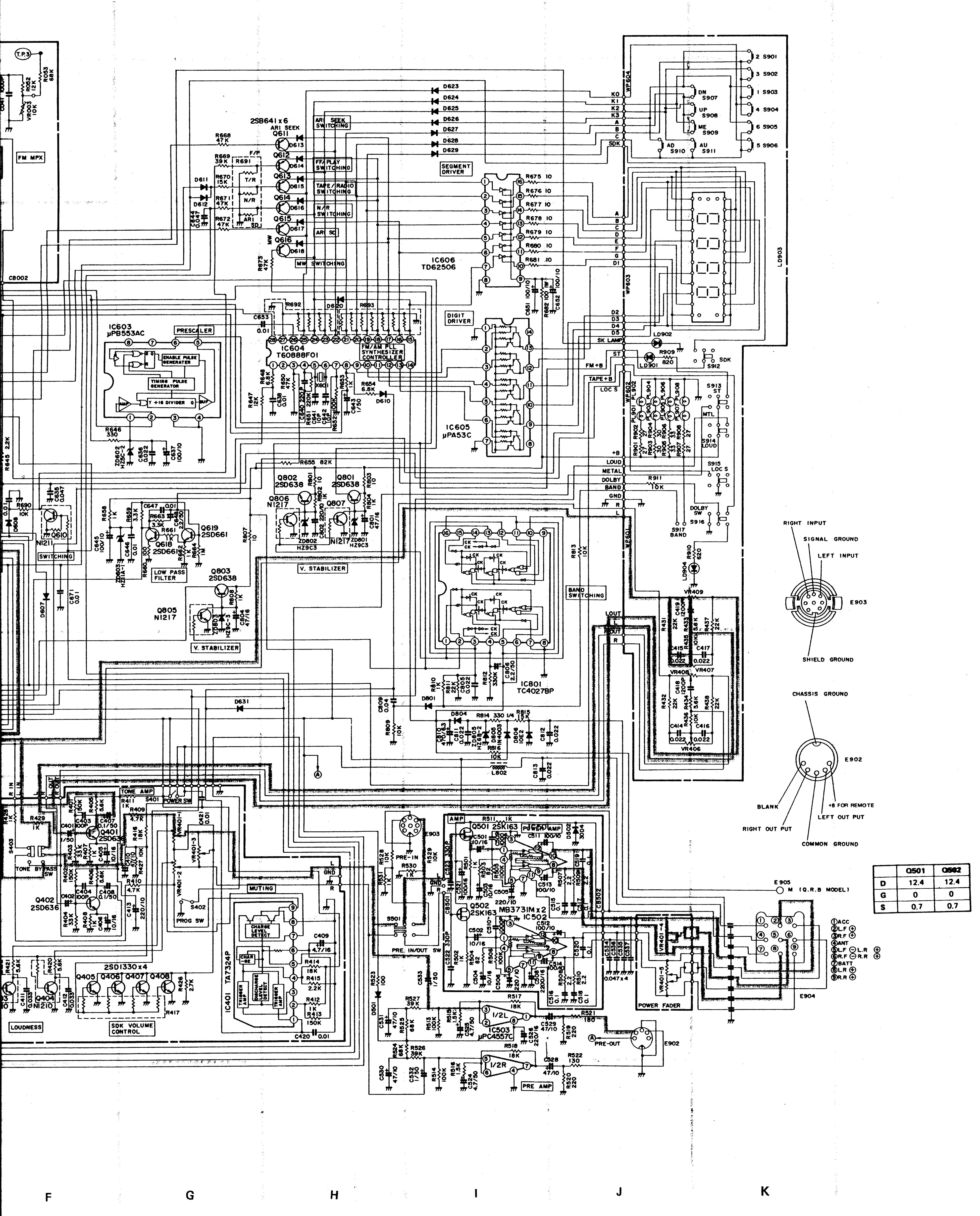
01 Q401-Q408 Q803 Q805 Q801 Q802 Q806 Q807 Q501 Q502

602 ZD603 D611 D612 D613-D618 D613 — D618 D610 D623–D629 D502 LD901 LD902

7 ZD803 HZ9C-3 D631 ZD802 ZD601 D620 D501 D801 D801 D805 D806 D501 HZ6B-2

Q408	Q601
0.7/0.3	6.7
0	0/0.1
0	0/8.7

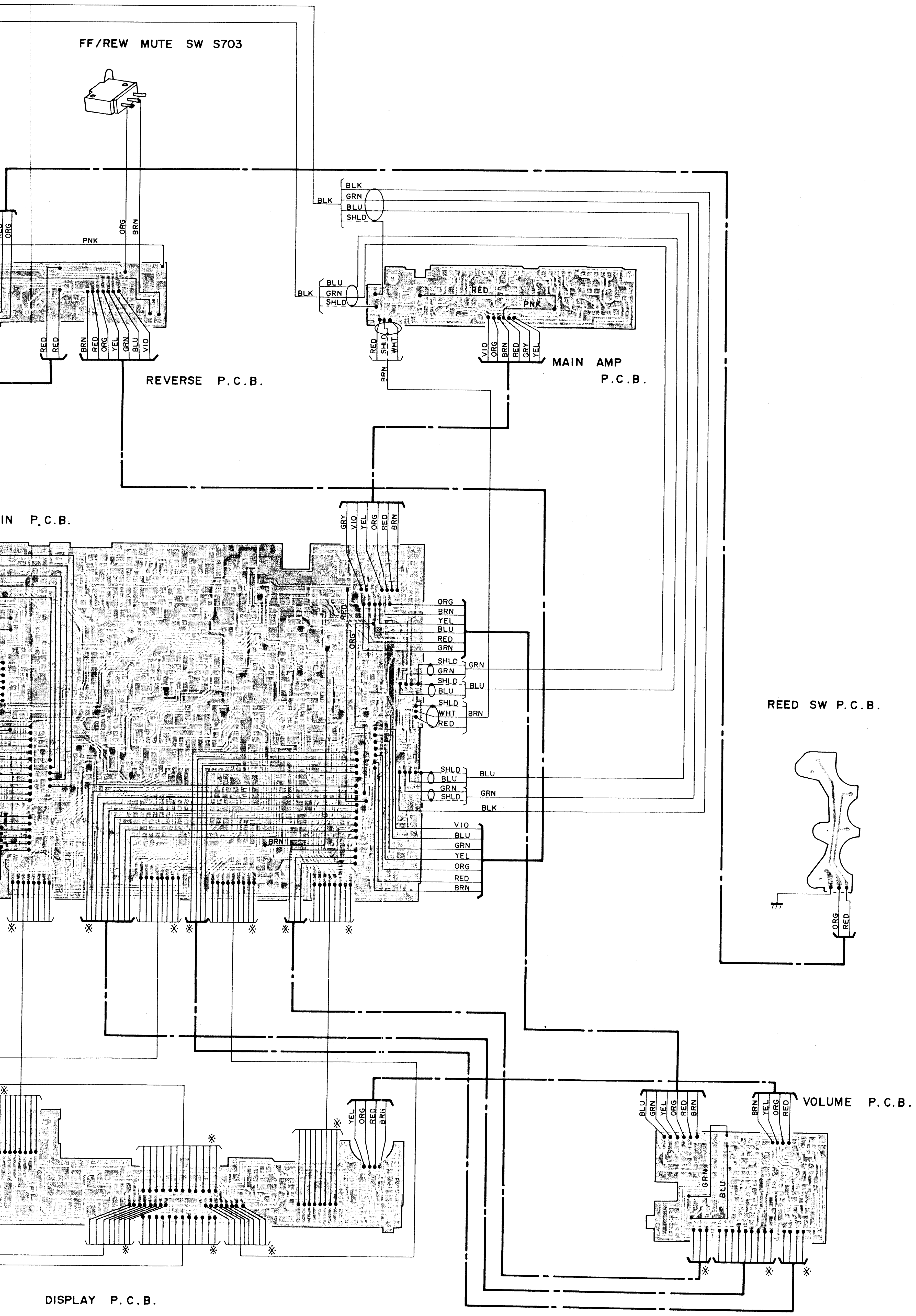
Q602	Q603	Q604	Q605	Q606	Q607	Q608	Q609	Q610	Q611	Q612	Q613	Q614	Q615	Q616	Q618	Q619	Q801	Q802	Q803	Q805	Q806	Q807
9.4/0.1	0/0.6	0/0.6	3.1	0.7	0.2	0	0/8.7	0	11.5/1.2	0/6.5	0/10	0.9/0.9	0	5.1/1.7	0.8	0.2	9.5	9.6/0.1	2.5/0.1	0/5	0/5	0/5
0/0.6	0	0	0	0.2	2.1/0.1	2.1/1.7	9.4/0	11.7/2	3.7	0.3/0.2	0/1.7	1.3/6.6	6.8	1.9	9.6	4.1	13.3/13.5	13.3/13.5	13.3/13.5	9.5/0.1	9.6/0.1	9.5
0	2.0/0	2.0/0	0	0	0	0	0	0	0/1.2	0	0.4/4.1	1.6/0.25	4.2	3.6/8.1	1.4	0.8	8.9	9.6/0.1	8.9/0	0	0	0

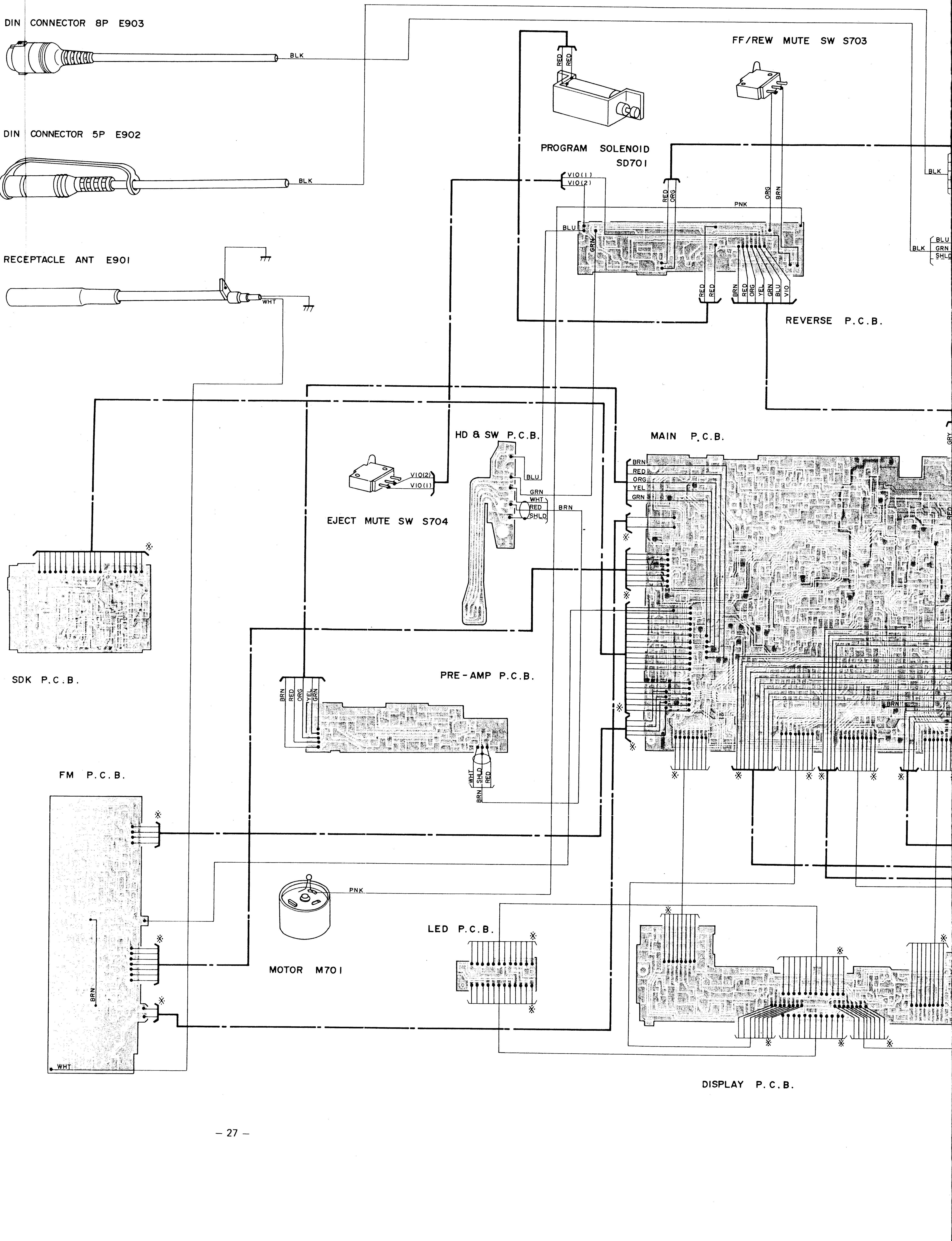


T.P.3
FM MPX
C8002
2SB641 x 6
ARI SEEK
Q611
Q612
Q613
Q614
Q615
Q616
D611
D612
D613
D614
D615
D616
D617
D618
F/P
T/R
N/R
ARI SD
ARI SEEK SWITCHING
FF/PLAY SWITCHING
TAPE/RADIO SWITCHING
N/R SWITCHING
ARI SD
MW SWITCHING
D623
D624
D625
D626
D627
D628
D629
SEGMENT DRIVER
IC606 TD62506
DIGIT DRIVER
IC605 μPA53C
IC603 μPB553AC
PRESCALER
ENABLE PULSE GENERATER
TIMING PULSE GENERATOR
T ÷16 DIVIDER
IC604 T60888F01
FM/AM PLL SYNTHESIZER CONTROLLER
D610
D620
R655 82K
Q802 2SD638
Q801 2SD638
Q806 N1217
Q807 N1217
ZD802 HZ9C3
ZD801 HZ9C3
V. STABILIZER
Q619 2SD661
Q618 2SD661
LOW PASS FILTER
Q803 2SD638
Q805 N1217
ZD803 HZ9C-3
V. STABILIZER
Q610 N1211
SWITCHING
BAND SWITCHING
IC801 TC4027BP
D631
D801
D804
D805
D806
L802
WP604
K0
K1
K2
K3
A
B
C
SDK
S901
S902
S903
S904
S905
S906
DN S907
UP S908
ME S909
AD S910
AU S911
LD903
WP603
D1
D2
D3
D4
D5
SK LAMP
ST
FM+B
TAPE+B
LOC S
LD902
R909 820
LD901
S912 SDK
S913 ST
MTL
S914 LOUD
S915 LOC S
WP602
PL901
PL902
PL903
PL904
PL905
PL906
PL907
PL908
+B
LOUD
METAL
DOLBY
BAND
GND
R
L
R911 10K
DOLBY SW S916
S917 BAND
WP601
R910 620
LD904
LOUT
ROUT
VR409
VR408
VR407
VR406
RIGHT INPUT
SIGNAL GROUND
LEFT INPUT
E903
SHIELD GROUND
CHASSIS GROUND
E902
BLANK
+B FOR REMOTE
LEFT OUT PUT
RIGHT OUT PUT
COMMON GROUND
E905
M (Q.R.B MODEL)
①ACC
②L.F ⊕
③R.F ⊕
④ANT
⑤L.F ⊖ L.R ⊕
⑥R.F ⊖ R.R ⊕
⑦BATT
⑧L.R ⊕
⑨R.R ⊕
E904
POWER FADER
VR401-4
VR401-5
0.047 x 4
TONE AMP
POWER SW
S401
S403
TONE BYPASS SW
Q401 2SD636
Q402 2SD636
VR401-1
VR401-2
VR401-3
S402
PROG SW
MUTING
CHARGE LEVEL DETECT
TRIGGER AMP
DISCHARGE LEVEL DETECT
IC401 TA7324P
2SD1330 x 4
Q405
Q406
Q407
Q408
Q404 N1210
LOUDNESS
SDK VOLUME CONTROL
E903
PRE-IN
S501
PRE IN/OUT SW
AMP
Q501 2SK163
Q502 2SK163
POWER AMP
MB3731M x 2
IC502
IC503 μPC4557C
1/2L
1/2R
PRE AMP
PRE-OUT
E902
Ⓐ
F
G
H
I
J
K

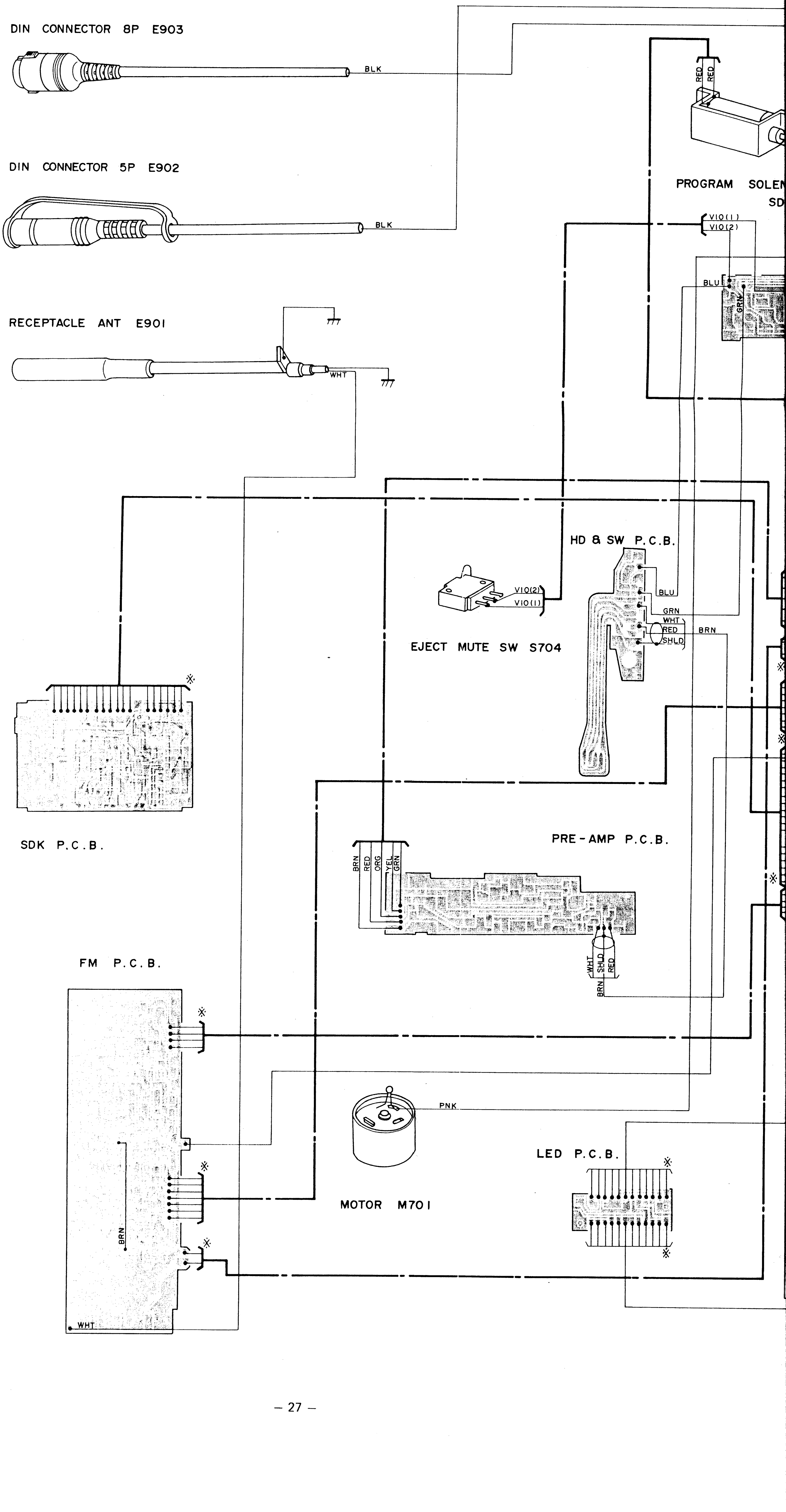
	Q501	Q502
D	12.4	12.4
G	0	0
S	0.7	0.7

3	4	5	6	7	8	9
3.8	0	0	6.3	13.8		


FF/REW MUTE SW S703
REVERSE P.C.B.
MAIN AMP P.C.B.
IN P.C.B.
REED SW P.C.B.
VOLUME P.C.B.
DISPLAY P.C.B.
BLK
GRN
BLU
SHLD
WHT
RED
BRN
ORG
YEL
GRY
VIO
PNK
※


DIN CONNECTOR 8P E903
BLK
DIN CONNECTOR 5P E902
BLK
RECEPTACLE ANT E901
WHT
PROGRAM SOLENOID
SD701
RED
RED
VIO(1)
VIO(2)
FF/REW MUTE SW S703
ORG
BRN
PNK
RED
ORG
BLU
GRN
RED
RED
BRN
RED
ORG
YEL
GRN
BLU
VIO
REVERSE P.C.B.
BLK
BLU
GRN
SHLD
HD & SW P.C.B.
BLU
GRN
WHT
RED
SHLD
BRN
VIO(2)
VIO(1)
EJECT MUTE SW S704
MAIN P.C.B.
BRN
RED
ORG
YEL
GRN
GRY
RED
BRN
SDK P.C.B.
PRE-AMP P.C.B.
BRN
RED
ORG
YEL
GRN
WHT
SHLD
RED
BRN
FM P.C.B.
BRN
WHT
PNK
MOTOR M701
LED P.C.B.
DISPLAY P.C.B.
※

Wiring Diagram


DIN CONNECTOR 8P E903
BLK
DIN CONNECTOR 5P E902
BLK
RECEPTACLE ANT E901
WHT
RED
RED
PROGRAM SOLEN
SD
VIO(1)
VIO(2)
BLU
GRN
HD & SW P.C.B.
VIO(2)
VIO(1)
BLU
GRN
WHT
RED
SHLD
BRN
EJECT MUTE SW S704
※
SDK P.C.B.
PRE-AMP P.C.B.
BRN
RED
ORG
YEL
GRN
WHT
SHLD
RED
BRN
FM P.C.B.
※
※
※
BRN
WHT
PNK
MOTOR M701
LED P.C.B.
※
※

Electrical Parts List

Carbon resistors of less than 1/4 watts are not entered on the parts list, so please confirm them using the schematic diagram.

Symbol No.	Part No.	Description
Volume P. C. Board		
IC		
IC401	51S42616F01	TA7324P
Transistors		
Q401	48S40627U01	2SD636-Q
Q402	48S40627U01	2SD636-Q
Q403	48T62540F10	UN1210
Q404	48T62540F10	UN1210
Q405	48T57337F01	2SD1330-S,T
Q406	48T57337F01	2SD1330-S,T
Q407	48T57337F01	2SD1330-S,T
Q408	48T57337F01	2SD1330-S,T
Capacitors		
C401	23T61524F32	Electrolytic 1µF 50V
C402	23T61524F32	Electrolytic 1µF 50V
C403	08S53332F23	CP. 100pF
C404	08S53332F23	CP. 100pF
C405	23T61524F13	Electrolytic 10µF 16V
C406	23T61524F13	Electrolytic 10µF 16V
C407	23T61524F28	Electrolytic 0.1µF 50V
C408	23T61524F28	Electrolytic 0.1µF 50V
C409	23S41059P18	Tantalum 4.7µF 16V
C410	23T61523F11	Electrolytic 47µF 10V
C411	08S53332F53	CP. 0.033µF
C412	08S53332F53	CP. 0.033µF
C413	23C44780P19	Electrolytic 220µF 10V
C420	21C45322G31	Ceramic 0.01µF
C421	21C45322G31	Ceramic 0.01µF
Resistors		
R401	06S53331F06	CP. 150k ohms
R402	06S53331F06	CP. 150k ohms
R403	06S53330F89	CP. 33k ohms
R404	06S53330F89	CP. 33k ohms
R405	06S53330F71	CP. 5.6k ohms
R406	06S53330F71	CP. 5.6k ohms
R407	06S53330F53	CP. 1k ohms
R408	06S53330F53	CP. 1k ohms
R409	06S53330F69	CP. 4.7k ohms
R410	06S53330F69	CP. 4.7k ohms
R411	06S53330F53	CP. 1k ohms
R412	06S53330F53	CP. 1k ohms
R413	06S53331F06	CP. 150k ohms
R414	06S53330F83	CP. 18k ohms
R415	06S53330F61	CP. 2.2k ohms

Symbol No.	Part No.	Description
R416	06S53330F83	CP. 18k ohms
R417	51T68217F01	Block RGLF 22x4
R420	06S53330F71	CP. 5.6k ohms
R421	06S53330F71	CP. 5.6k ohms
R426	06S53330F63	CP. 2.7k ohms
R427	06S53330F77	CP. 10k ohms
R428	06S53330F53	CP. 1k ohms
R429	06S53330F53	CP. 1k ohms
VR401-1		Volume Control (VOL)
VR401-2		Volume Control (VOL)
VR401-3		Volume Control (BAL)
VR401-4	18T68058F01	Volume Control (FAD)
VR401-5		Volume Control (FAD)
S401		Volume Control (Power)
S402		Volume Control (Prog)
Switch		
S403	40T68063F01	SSJ-322A (TONE BYPASS)
Front and Display P. C. Board		
Lamps		
PL901	65T63304F04	Pilot, 6V-65mA
PL902	65T63304F04	Pilot, 6V-65mA
PL903	65T42192F01	Pilot, 6V-65mA
PL904	65T42192F01	Pilot, 6V-65mA
PL905	65T63304F04	Pilot, 6V-65mA
PL906	65T68826F01	Long, 5V-30mA
PL907	65T63304F04	Pilot, 6V-65mA
PL908	65T42192F01	Pilot, 6V-65mA
LEDs		
LD901	48T41563F01	PG5531KX (GRN) (ST)
LD902	48T50180F01	PY-5531K (YEL) (SK)
LD903	48T58082F01	LN543GKH3 MD
LD904	48T51833F03	BG4524K (GRN) (DOLBY)
Switches		
S901	40T70366F01	Switch, Tact (2)
S902	40T70366F01	Switch, Tact (3)
S903	40T70366F01	Switch, Tact (1)
S904	40T70366F01	Switch, Tact (4)
S905	40T70366F01	Switch, Tact (6)
S906	40T70366F01	Switch, Tact (5)
S907	40T70366F01	Switch, Tact (TUNE DN)
S908	40T70366F01	Switch, Tact (TUNE UP)
S909	40T70366F01	Switch, Tact (MEMORY)
S910	40T70366F01	Switch, Tact (SEEK DN)

Symbol No.	Part No.	Description
S911	40T70366F01	Switch, Tact (SEEK UP)
S912	40T65584F01	SPH 221H (SDK)
S913	40T65584F01	SPH 221H (ST/MONO)
S914	40T65584F01	SPH 221H (LOUD)
S915	40T65584F01	SPH 221H (LOC.S)
S916	40T65584F01	SPH 221H (DOLBY)
S917	40T65584F02	SPH 222H (BAND)
Capacitors		
C414	08T42629F21	Mylar 0.022μF
C415	08T42629F21	Mylar 0.022μF
C416	08T42629F21	Mylar 0.022μF
C417	08T42629F21	Mylar 0.022μF
C418	08T42629F06	Mylar 1200pF
C419	08T42629F06	Mylar 1200pF
Resistors		
VR406	18T58245F01	VR, S1021 100k ohms-B (Treble)
VR407		VR, S1021 100k ohms-B (Treble)
VR408	18T58245F01	VR, S1021 100k ohms-B (Bass)
VR409		VR, S1021 100k ohms-B (Bass)
Rear and Power-Amp. P. C. Board		
ICs		
IC501	51T53245F01	MB3731M
IC502	51T53245F01	MB3731M
Diode		
D502	48T68079F02	30D4FE
Capacitors		
C501	23T61512F08	Electrolytic 10μF 16V
C502	23T61512F08	Electrolytic 10μF 16V
C503	23T61512F08	Electrolytic 10μF 16V
C504	23T61512F08	Electrolytic 10μF 16V
C505	23C44780P19	Electrolytic 220μF 10V
C506	23C44780P19	Electrolytic 220μF 10V
C508	23T51232F01	Electrolytic 2200μF 16V
C509	08T65480F49	Ceramic 1000pF
C510	08T65480F49	Ceramic 1000pF
C511	23C44780P20	Electrolytic 100μF 10V
C512	23C44780P20	Electrolytic 100μF 10V
C513	23C44780P20	Electrolytic 100μF 10V
C514	23C44780P20	Electrolytic 100μF 10V
C515	08T57851F13	TF. 0.1μF

Symbol No.	Part No.	Description
C516	08T57851F13	TF. 0.1μF
C517	08T57851F13	TF. 0.1μF
C518	08T57851F13	TF. 0.1μF
C519	08T50579F13	TF. 0.1μF
C520	08T57851F13	TF. 0.1μF
C521	23C44780P16	Electrolytic 100μF 16V
C522	21C45322G26	Ceramic 330pF
C523	21C45322G26	Ceramic 330pF
FETs		
Q501	48T53397F05	2SK163-M1
or	48T53397F06	2SK163-M2
Q502	48T53397F05	2SK163-M1
or	48T53397F06	2SK163-M2
Main P. C. Board		
ICs		
IC301	51T68150F01	HA12046
IC503	51S43471U01	μPC4557C
IC603	51T43271F01	μPB553AC
IC604	51T60888F01	60888F01
IC605	51S42270F01	μPA53C
IC606	51T47837F01	TD62506
IC801	51T63606F01	TC4027BP
Transistors		
Q101	48T62540F07	UN1217
Q102	48T62540F07	UN1217
Q103	48T57337F01	2SD1330-S,T
Q301	48S40627U01	2SD636-Q
Q610	48T62540F01	UN1211
Q611	48S40591U01	2SB641-Q
Q612	48S40591U01	2SB641-Q
Q613	48S40591U01	2SB641-Q
Q614	48S40591U01	2SB641-Q
Q615	48S40591U01	2SB641-Q
Q616	48S40591U01	2SB641-Q
Q618	48T42182U01	2SD661-U
Q619	48T42182U01	2SD661-U
Q801	48S42455F01	2SD638-R
Q802	48S42455F01	2SD638-R
Q803	48S42455F01	2SD638-R
Q805	48T62540F07	UN1217
Q806	48T62540F07	UN1217
Q807	48T62540F07	UN1217

Symbol No.	Part No.	Description
Diodes		
D104	48T58583F01	SS176
or	48T44813F01	MA165TA
D105	48T58583F01	SS176
or	48T44813F01	MA165TA
D106	48T58583F01	SS176
or	48T44813F01	MA165TA
D107	48T58583F01	SS176
or	48T44813F01	MA165TA
D501	48T58583F01	SS176
or	48T44813F01	MA165TA
D605	48T58583F01	SS176
or	48T44813F01	MA165TA
D606	48T58583F01	SS176
or	48T44813F01	MA165TA
D607	48T58583F01	SS176
or	48T44813F01	MA165TA
D608	48T58583F01	SS176
or	48T44813F01	MA165TA
D610	48T58583F01	SS176
or	48T44813F01	MA165TA
D611	48T58583F01	SS176
or	48T44813F01	MA165TA
D612	48T58583F01	SS176
or	48T44813F01	MA165TA
D613	48T58583F01	SS176
or	48T44813F01	MA165TA
D614	48T58583F01	SS176
or	48T44813F01	MA165TA
D615	48T58583F01	SS176
or	48T44813F01	MA165TA
D616	48T58583F01	SS176
or	48T44813F01	MA165TA
D617	48T58583F01	SS176
or	48T44813F01	MA165TA
D618	48T58583F01	SS176
or	48T44813F01	MA165TA
D620	48T58583F01	SS176
or	48T44813F01	MA165TA
D623	48T58583F01	SS176
or	48T44813F01	MA165TA
D624	48T58583F01	SS176
or	48T44813F01	MA165TA
D625	48T58583F01	SS176
or	48T44813F01	MA165TA
D626	48T58583F01	SS176
or	48T44813F01	MA165TA
D627	48T58583F01	SS176
or	48T44813F01	MA165TA
D628	48T58583F01	SS176
or	48T44813F01	MA165TA
D629	48T58583F01	SS176
or	48T44813F01	MA165TA
D630	48T58583F01	SS176
or	48T44813F01	MA165TA
D631	48T58583F01	SS176
or	48T44813F01	MA165TA
D801	48T58583F01	SS176
or	48T44813F01	MA165TA
D804	48T58583F01	SS176
or	48T44813F01	MA165TA
D805	48S40477U01	IN4003
D806	48C40235G02	10E2
ZD301	48T52739F58	Zener, HZ 9C-1
ZD602	48T52739F32	Zener, HZ 5C-2
ZD603	48T52739F61	Zener, HZ 11A-1
ZD801	48T40150U99	Zener, HZ 9C-3
ZD802	48T52739F60	Zener, HZ 9C-3
ZD803	48T52739F60	Zener, HZ 9C-3
ZD805	48T52739F38	Zener, HZ 6B-2
Coils		
L601	24T42241U01	Dolby 23 (WHT)
L602	24T42241U01	Dolby 23 (WHT)
L802	25T40455U05	Choke Trans.
Crystal		
X601	48T68055F01	4.5MHz
Thermistor		
TH601	48S42931U34	10k ohms
Switch		
S501	40T68056F01	SS-322(B) PRE.
Capacitors		
C101	23T61523F28	Electrolytic 0.47μF 50V
C102	23T61523F29	Electrolytic 1μF 50V
C103	23T61523F25	Electrolytic 0.1μF 50V
C104	23T61523F12	Electrolytic 10μF 16V
C105	23T57422F15	Electrolytic 47μF 16V
C106	23T57422F08	Electrolytic 4.7μF 25V
C107	08T65480F61	Ceramic 0.01μF
C108	08T42629F77	Mylar 0.068μF
C301	23T57007F09	Electrolytic 10μF 16V
C302	23T57007F09	Electrolytic 10μF 16V
C303	08T42629F63	Mylar 4700pF

Symbol No.	Part No.	Description
C304	08T57705F63	Mylar 4700pF
C305	23T61523F17	Electrolytic 4.7µF 25V
C306	23T61524F18	Electrolytic 4.7µF 25V
C307	08T42629F70	Mylar 0.018µF
C308	08T57705F70	Mylar 0.018µF
C309	23T43247F05	Electrolytic 1µF 50V
C310	23T57007F05	Electrolytic 1µF 50V
C311	23T61523F27	Electrolytic 0.33µF 50V
C312	23T61524F30	Electrolytic 0.33µF 50V
C313	23T61523F29	Electrolytic 1µF 50V
C314	23T61524F32	Electrolytic 1µF 50V
C315	08T57705F73	Mylar 0.033µF
C316	08T57705F73	Mylar 0.033µF
C317	23T61524F13	Electrolytic 10µF 16V
C318	23T61524F13	Electrolytic 10µF 16V
C319	23C44780P17	Electrolytic 220µF 16V
C320	23C44780P16	Electrolytic 100µF 16V
C321	23C44780P19	Electrolytic 220µF 10V
C524	23T61524F35	Electrolytic 4.7µF 50V
C525	23T61524F35	Electrolytic 4.7µF 50V
C526	23C44780P17	Electrolytic 220µF 16V
C528	23T61513F09	Electrolytic 47µF 10V
C529	23T61513F09	Electrolytic 47µF 10V
C530	23T61513F09	Electrolytic 47µF 10V
C531	23T61513F09	Electrolytic 47µF 10V
C532	23T61524F32	Electrolytic 1µF 50V
C533	23T61524F32	Electrolytic 1µF 50V
C534	08T57705F75	Mylar 0.047µF
C535	08T57705F75	Mylar 0.047µF
C536	08T42629F75	Mylar 0.047µF
C537	08T42629F75	Mylar 0.047µF
C632	08T42629F77	Mylar 0.068µF
C633	08T42629F77	Mylar 0.068µF
C634	23T61523F12	Electrolytic 10µF 16V
C635	08T52714F21	Ceramic 0.047µF
C636	08S44505P63	Ceramic 0.022µF
C637	23C44780P20	Electrolytic 100µF 10V
C638	08T65480F61	Ceramic 0.01µF
C640	08T65480F41	Ceramic 220pF
C641	08T65480F13	Ceramic 10pF
C642	08T65480F13	Ceramic 10pF
C643	23T43247F05	Electrolytic 1µF 50V
C644	21C45322G33	Ceramic 0.047µF
C645	23C44780P20	Electrolytic 100µF 10V
C646	08T65480F61	Ceramic 0.01µF
C647	08T65480F61	Ceramic 0.01µF

Symbol No.	Part No.	Description
C648	23T41366F41	Electrolytic B.P. 2.2µF 50V
C651	23C44780P20	Electrolytic 100µF 10V
C652	23C44780P20	Electrolytic 100µF 10V
C653	08T55260F61	Ceramic 0.01µF
C662	08T44979P12	Ceramic 0.047µF
C663	08T65480F55	Ceramic 3300pF
C664	08T65480F55	Ceramic 3300pF
C666	08T65480F61	Ceramic 0.01µF
C671	08T65480F61	Ceramic 0.01µF
C801	23T57422F15	Electrolytic 47µF 16V
C802	23C44780P19	Electrolytic 220µF 10V
C804	23T43247F14	Electrolytic 47µF 16V
C805	08T44979P10	Ceramic 0.022µF
C806	23T61523F30	Electrolytic 2.2µF 50V
C809	08S40805F22	Ceramic 0.04µF
C810	23T43247F20	Electrolytic 470µF 6.3V
C811	08S44505P63	Ceramic 0.022µF
C812	08S40805F21	Ceramic 0.022µF
C813	21C45322G32	Ceramic 0.022µF
Resistors		
R682	06C44652G33	Metal, Film 100 ohms 1W
R691	51T58409F04	Block 3 x 47k
R692	51T58409F01	Block RGLD 4 x 22k
R693	51T58409F03	Block RGLD 7 x 22k
VR301	18T42748F13	Sol.V 10k ohms
VR302	18T42748F13	Sol.V 10k ohms
SDK P. C. Board		
ICs		
IC601	51T69141F01	LA2220
IC602	51T47473F01	LA2211
Transistors		
Q601	48T62540F07	UN1217
Q602	48T62540F01	UN1211
Q603	48T57337F01	2SD1330-S,T
Q604	48T57337F01	2SD1330-S,T
Q605	48T62540F07	UN1217
Q606	48S40627U01	2SD636-Q
Q607	48S40627U01	2SD636-Q
Q608	48T63417F03	2SC2412K
Q609	48T62540F01	UN1211

Symbol No.	Part No.	Description
Diodes		
D601	48T52446F01	CP. MA151WK
D602	48T52446F01	CP. MA151WK
D603	48T52444F01	CP. MA151A
D632	48T52446F01	CP. MA151WK
ZD601	48T52739F52	Zener, HZ 9A-1
Crystal		
CF601	91T69142F01	456F13
Capacitors		
C601	23T61524F32	Electrolytic 1μF 50V
C602	08S60102F28	CP. 0.047μF
C603	23T57007F04	Electrolytic 0.47μF 50V
C604	23T61524F30	Electrolytic 0.33μF 50V
C605	08T42629F77	Mylar 0.068μF
C606	23T61524F09	Electrolytic 22μF 10V
C607	23T43247F08	Electrolytic 4.7μF 25V
C608	08T42629F09	Mylar 2200pF
C609	08T57705F55	Mylar 1000pF
C610	08T57705F55	Mylar 1000pF
C611	23T61524F12	Electrolytic 100μF 10V
C612	23T61524F13	Electrolytic 10μF 16V
C613	23T43247F08	Electrolytic 4.7μF 25V
C614	23T61523F29	Electrolytic 1μF 50V
C615	23T43707U05	Electrolytic 220μF 16V
C616	23T61524F18	Electrolytic 4.7μF 25V
C617	23T61524F18	Electrolytic 4.7μF 25V
C618	23T61524F18	Electrolytic 4.7μF 25V
C619	23T61524F18	Electrolytic 4.7μF 25V
C620	23T61524F18	Electrolytic 4.7μF 25V
C621	23T61524F18	Electrolytic 4.7μF 25V
C622	23T61524F18	Electrolytic 4.7μF 25V
C623	23T61524F13	Electrolytic 10μF 16V
C624	08T50579F17	TF. 0.22μF
C625	23T61524F32	Electrolytic 1μF 50V
C626	23T61524F05	Electrolytic 22μF 6.3V
C627	23T61524F06	Electrolytic 33μF 6.3V
C628	23S41198U33	Electrolytic 100μF 10V
C629	23S41198U33	Electrolytic 100μF 10V
C630	23T43247F09	Electrolytic 10μF 16V
C665	23T61523F12	Electrolytic 10μF 16V
Resistors		
R601	06S53330F65	CP. 3.3k ohms
R602	06S53330F53	CP. 1k ohms
R603	06S53330F05	CP. 10 ohms
R604	06S53330F59	CP. 1.8k ohms
R605	06S53330F34	CP. 160 ohms
R606	06S53330F93	CP. 47k ohms
R607	06S53330F69	CP. 4.7k ohms
R608	06S53330F84	CP. 20k ohms
R609	06S53330F81	CP. 15k ohms
R610	06S53330F69	CP. 4.7k ohms
R611	06S53330F93	CP. 47k ohms
R612	06S53330F53	CP. 1k ohms
R613	06S53330F77	CP. 10k ohms
R614	06S53330F21	CP. 47 ohms
R615	06S53330F77	CP. 10k ohms
R616	06S53330F77	CP. 10k ohms
R617	06S53330F95	CP. 56k ohms
R618	06S53330F93	CP. 47k ohms
R619	06S53330F29	CP. 100 ohms
R620	06S53330F77	CP. 10k ohms
R621	06S53330F77	CP. 10k ohms
R622	06S53330F65	CP. 3.3k ohms
R623	06S53331F24	CP. 820k ohms
R624	06S53331F12	CP. 270k ohms
R625	06S53330F53	CP. 1k ohms
R626	06S53331F27	CP. 1.2M ohms
R627	06S53330F77	CP. 10k ohms
R628	06S53330F71	CP. 5.6k ohms
R629	06S53330F53	CP. 1k ohms
R630	06S53330F85	CP. 22k ohms
R631	06S53330F71	CP. 5.6k ohms
R632	06S53330F71	CP. 5.6k ohms
R633	06S53330F57	CP. 1.5k ohms
R634	06S53330F37	CP. 220 ohms
R635	06S53330F53	CP. 1k ohms
R636	06S53331F02	CP. 100k ohms
R689	06S53331F02	CP. 100k ohms
VR601	18T42748F13	Sol.V 10k ohms

Symbol No.	Part No.	Description
FM P. C. Board		
ICs		
IC001	51S47809F01	LA1140
IC002	51T51257F01	LA2110
IC003	51T58407F01	LA3376
Transistors		
Q001	48S40627U01	2SD636-Q
Q002	48T56488F03	2SC2787
Q003	48S44578J01	2SC945L-P
Q004	48S40627U01	2SD636-Q
Q005	48S40627U01	2SD636-Q
Q006	48S40591U01	2SB641-Q
Q007	48S40627U01	2SD636-Q
Q008	48S40627U01	2SD636-Q
Diodes		
D003	48T44813F01	MA165TA
D004	48T44813F01	MA165TA
D005	48T44813F01	MA165TA
D006	48T44813F01	MA165TA
D007	48S134816	1S1555
D101	48S134816	1S1555
D102	48S134816	1S1555
ZNR001	48T57250F01	Zener, ERZ-D03DK331
Coils		
L001	24T51656F18	Inductor 4.7μH
L002	24T58377F01	Inductor FM (WHT)
L101	24T51656F22	Inductor 10μH
T001	24T58377F02	FM 7 kHz (BLU)
Filters		
CF001	91T66228F01	Ceramic 10.7MHz
CF002	91T66228F01	Ceramic 10.7MHz
CF003	91T66228F01	Ceramic 10.7MHz
Lamps		
NL001	65T56426F01	Neon Lamp
Capacitors		
C001	23T61523F11	Electrolytic 47μF 10V
C002	08T65480F61	Ceramic 0.01μF
C003	08T44979P10	Ceramic 0.022μF
C004	08T44979P10	Ceramic 0.022μF
C005	08T44979P10	Ceramic 0.022μF
C006	23T61524F32	Electrolytic 1μF 50V
C007	08T52714F21	Ceramic 0.047μF
C008	08T65480F25	Ceramic 33pF
C009	23T57007F08	Electrolytic 4.7μF 25V
C010	23T61524F32	Electrolytic 1μF 50V
C011	23S41198U26	Electrolytic 47μF 10V
C012	08T44979P08	Ceramic 0.01μF
C013	23T61513F09	Electrolytic 47μF 10V
C014	08T65480F61	Ceramic 0.01μF
C015	23T57007F01	Electrolytic 0.1μF 50V
C017	23S41198U33	Electrolytic 100μF 10V
C018	23T57007F08	Electrolytic 4.7μF 25V
C019	08T57705F17	MYlar 0.01μF
C020	08T57705F17	Mylar 0.01μF
C021	23T61524F14	Electrolytic 22μF 16V
C023	08T65480F47	Ceramic 680pF
C024	08T65480F47	Ceramic 680pF
C025	08T65480F50	Ceramic 1200pF
C026	08T65480F33	Ceramic 68pF
C027	08T65480F42	Ceramic 270pF
C028	08T65480F42	Ceramic 270pF
C029	08T65480F42	Ceramic 270pF
C030	08T65480F42	Ceramic 270pF
C031	08T65480F53	Ceramic 2200pF
C032	08T65480F59	Ceramic 6800pF
C033	08T57705F25	Mylar 0.047μF
C034	23T57007F08	Electrolytic 4.7μF 25V
C035	08T65480F31	Ceramic 56pF
C036	08T57705F17	Mylar 0.01μF
C037	08T65480F61	Ceramic 0.01μF
C038	23S41059P14	Tantalum 3.3μF 16V
C039	23S41059P14	Tantalum 3.3μF 16V
C040	23S41059P07	Tantalum 1μF 35V
C041	08T42081U25	Polypropylene 1000pF
C042	08T57705F25	Mylar 0.047μF
C043	08T57705F23	Mylar 0.033μF
C044	23T61524F14	Electrolytic 22μF 16V
C045	08T57705F11	Mylar 3300pF
C051	23S41198U33	Electrolytic 100μF 10V
C054	23T57007F10	Electrolytic 22μF 6.3V
C056	08T42629F24	Mylar 0.039μF
C057	08T42629F24	Mylar 0.039μF

Symbol No.	Part No.	Description
Resistors		
VR001	18T42748F13	Sol. Variable 10k ohms
VR002	18T60065F19	Sol. Variable 100k ohms
VR003	18T60065F13	Sol. Variable 10k ohms
VR004	18T42748F05	Sol. Variable 470 ohms
Pre-Amp P. C. Board		
IC		
IC201	51T56391F01	M51522AL
Transistors		
Q201	48T63417F01	CP. 2SC2412K
Q202	48T63417F01	CP. 2SC2412K
Capacitors		
C201	08S53332F33	CP. 680pF
C202	08S53332F33	CP. 680pF
C203	23T61523F10	Electrolytic 33μF 10V
C204	23T61523F10	Electrolytic 33μF 10V
C205	23T61523F28	Electrolytic 0.47μF 50V
C206	23T61523F28	Electrolytic 0.47μF 50V
C207	08T42629F67	Mylar 0.01μF
C208	08T42629F67	Mylar 0.01μF
C209	23T61523F11	Electrolytic 47μF 10V
C210	23T61523F11	Electrolytic 47μF 10V
C211	23T61523F32	Electrolytic 4.7μF 50V
C212	23T61523F32	Electrolytic 4.7μF 50V
C213	23T61523F15	Electrolytic 47μF 16V
Resistors		
R201	06S53330F35	CP. 180 ohms
R202	06S53330F35	CP. 180 ohms
R203	06S53331F14	CP. 330k ohms
R204	06S53331F14	CP. 330k ohms
R205	06S53330F73	CP. 6.8k ohms
R206	06S53330F73	CP. 6.8k ohms
R207	06S53330F69	CP. 4.7k ohms
R208	06S53330F69	CP. 4.7k ohms
R209	06S53330F61	CP. 2.2k ohms
R210	06S53330F61	CP. 2.2k ohms
R211	06S53331F02	CP. 100k ohms
R212	06S53331F02	CP. 100k ohms
R213	06S53330F53	CP. 1k ohms
R214	06S53330F81	CP. 15k ohms
R215	06S53330F79	CP. 12k ohms

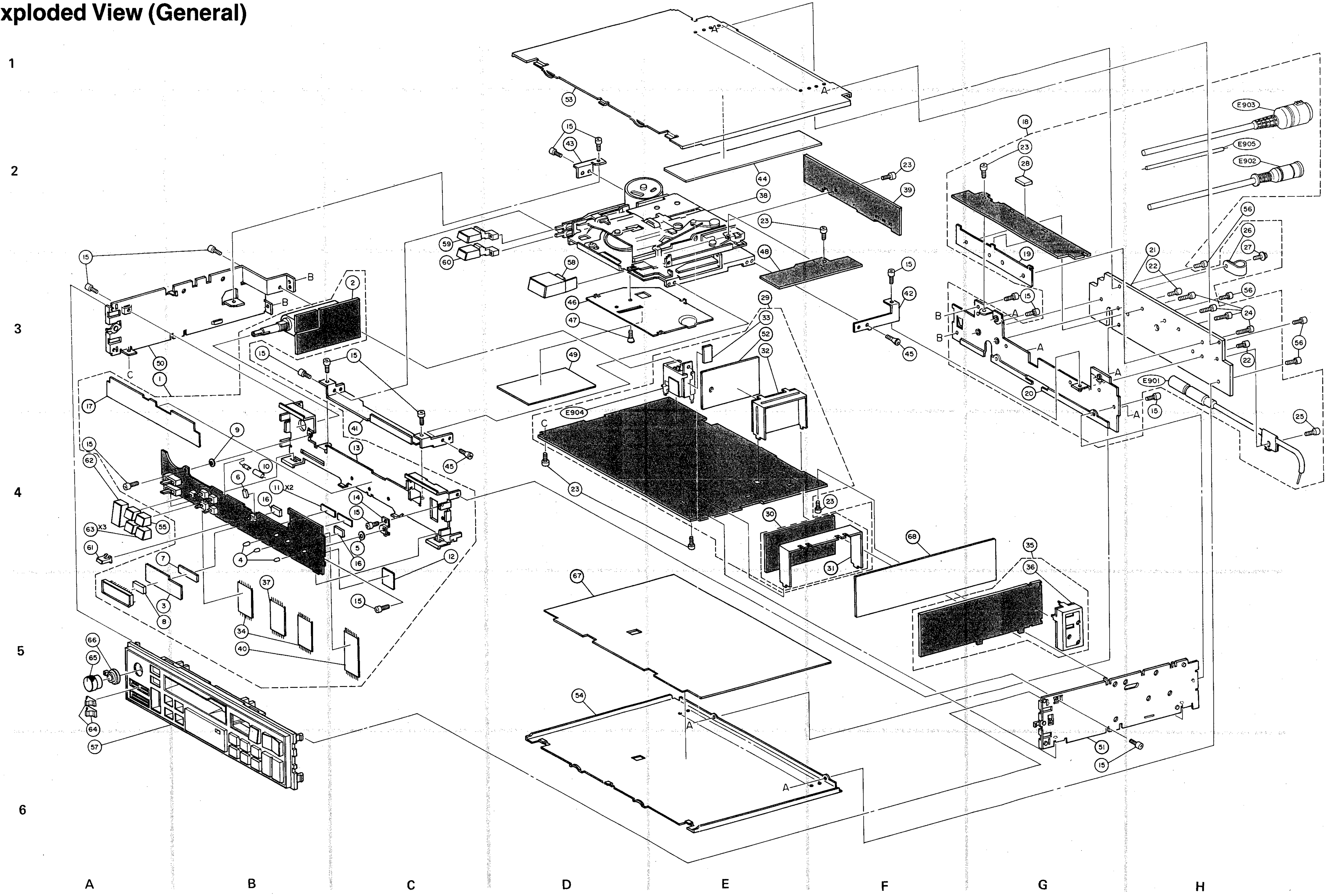
Symbol No.	Part No.	Description
Reverse P. C. Board		
IC		
IC701	51T52421F01	52421F01
Diodes		
D701	48S40477U01	IN4003
D702	48T44813F01	MA165TA
D703	48T44813F01	MA165TA
D704	48T44813F01	MA165TA
D705	48T44813F01	MA165TA
D706	48T44813F01	MA165TA
D707	48T44813F01	MA165TA
ZD701	48T52739F16	Zener, HZ 4A-1
Capacitors		
C701	23T43247F02	Electrolytic 0.22μF 50V
C702	23S41198U34	Electrolytic 100μF 16V
C703	23T43247F10	Electrolytic 22μF 16V
C704	23T43247F09	Electrolytic 10μF 16V
C705	23T43247F09	Electrolytic 10μF 16V
C706	23T43247F09	Electrolytic 10μF 16V
Resistor		
R702	06C43205J26	Metal, Film 4.7 ohms 1/2W
Miscellaneous Parts		
E901	09T68242F01	Receptacle, Antenna
E902	30T51222F08	Assy., Din Cable 5-Pin
E903	01T68325F01	Assy., Din Cable 8-Pin
E904	08T62340F01	Cap., Through Box 9-Pin
E905	01T63637F02	Assy.,Wire Back UP
HD201	88T50977F01	Playback Head
S701	40T40641U02	Switch Reed
S702	40T40641U02	Switch Reed
S703	40T41665F01	Switch Slide
S704	40T41665F01	Switch Slide
S706	40T52216F01	Switch Micro
SD701	01T51605F01	Assy., Riv. Solenoid
M701	01V61500F28	Assy., Motor

Mechanical Parts List

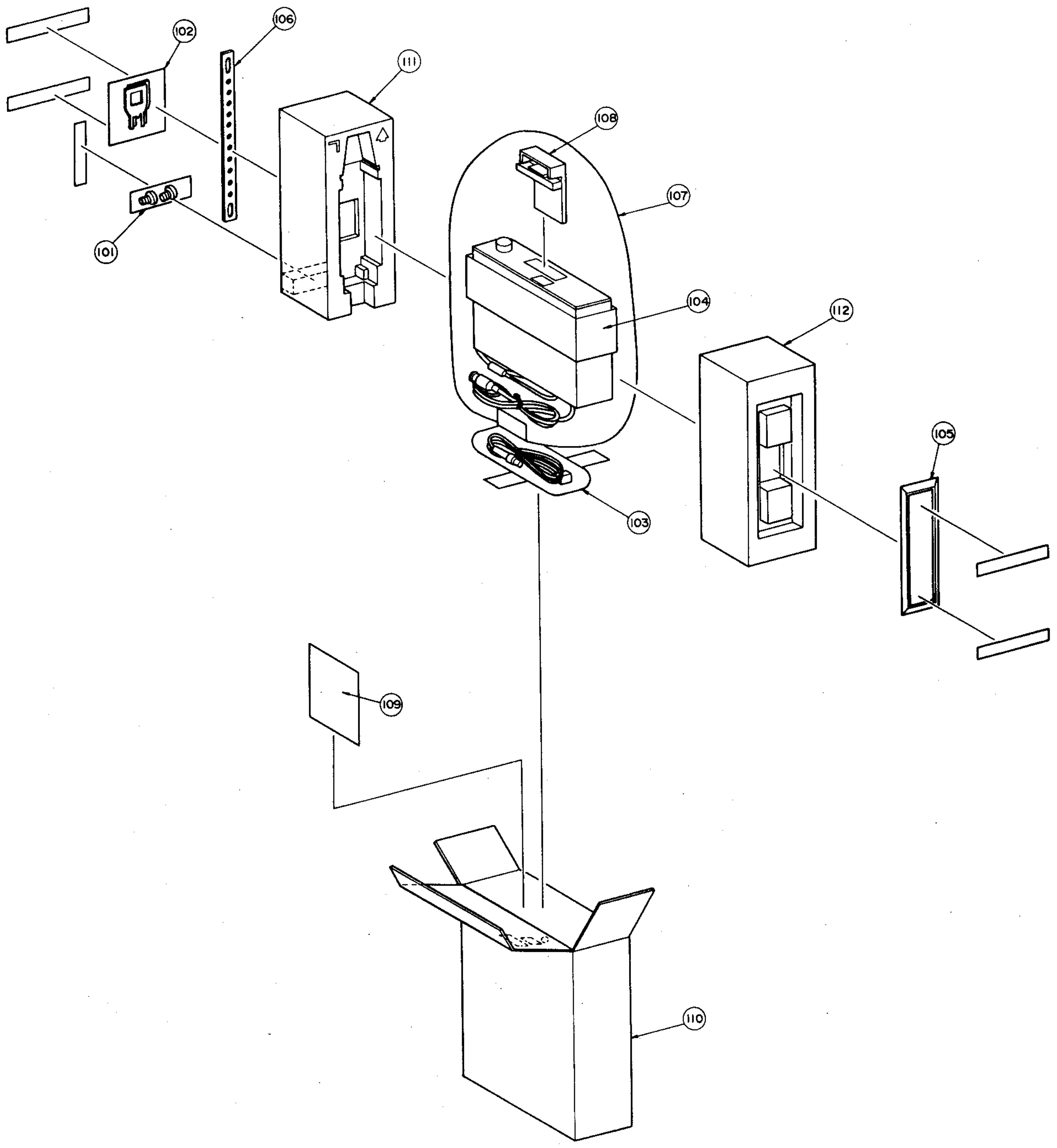
Symbol No.	Idx.	Part No.	Description
1	4A	*	Assy., Front and Display
2	3B	01V68800F39	Assy., Volume Panel
3	5A	84B63566F01	Panel, LED
4	5B	43A45130F11	Bush, Lamp
5	4C	04A66026F01	Washer Polyslider (M3.2)
6	4B	75S62361F17	Cushion, Rubber.
7	5A	75S62361F30	Cushion, Rubber.
8	5A	75S68249F01	Cushion, Rubber.
9	4B	04A66026F02	Washer Polyslider (M3.2)
10	4B	43A69040F02	Bushing, Lamp (L)
11	4B	14S58462F74	Insulator, Cover
12	5C	14S58462F75	Insulator, Cover
13	4C	*	Chassis, Front
14	4C	07A56318F01	Bracket, Panel Front
15		03S44205G07	Screw, Pan (M2.6x5)
16	4B	75S62361F18	Cushion, Rubber.
17	4A	*	Insulator, Fiber
18	3G	*	Assy., Rear and Power
19	3F	*	Bracket, IC
20	4G	*	Chassis, Rear
21	3G	*	Heat, Sink
22	3G	03S44205G33	Screw, Pan (M2.6x8)
23		03S44205G48	Screw, Pan (M2.6x5)
24	3H	03S43997P27	Screw, Bind (M2.6x12)
25	4H	03S40012G03	Screw, Tapping (M3x6)
26	3H	42C67007F05	Clamp, Cord
27	3H	03S40018G04	Screw, Tapping (M3x12)
28	2F	75S62361F18	Cushion, Rubber
29	4E	*	Assy., Main Panel
30	5E	*	Assy., SDK Unit
31	5E	*	Case, Panel
32	4E	77T68078F01	Tuner, AM (BFC731M12)
33	3E	14S58462F77	Insulator Cover
34	5B	30T63636F10	Wire, Paralleel 8-Pin
35	5F	*	Assy., FM Panel
36	5G	77T63428F02	Tuner (BFE151U12)
37	5B	30T63636F06	Wire, Paralleel 9-Pin
38	3E	81D52292F02	Cassette Deck (GW75B38N)
39	3F	01V64200F89	Assy., Reverse Panel
40	5B	30T63636F11	Wire, Paralleel 8-Pin
41	4C	*	Bracket, Deck Front
42	3F	*	Bracket, Deck Rear
43	2D	*	Bracket, Deck
44	2E	14S53018F95	Insulator, Cover
45	3F	03S44205G13	Screw, Countersink (M2.6x6)
46	3D	*	Cover, Deck
47	3D	03S40011G95	Screw, Countersink (M2.6x4)
48	3E	*	Assy., Pre-Amp Panel
49	3D	*	Cover, Deck
50	3A	*	Chassis, Side (L)
51	6G	*	Chassis, Side (R)
52	4E	*	Insulator, Cover
53	2D	15C63097F05	Cover, Top
54	6D	15C63098F05	Cover, Bottom
55	4A	36B67762F01	Knob, Push Dolby
56	3H	03S40012G90	Screw, Tapping (M2.6x10)
57	6A	13D68034F02	Nose, Piese Assy.
58	3D	36B63437F01	Knob, Eject Assy.
59	3C	36C63444F01	Knob, FF Assy.
60	3C	36C63444F02	Knob, Rew Assy.
61	5A	36A63436F01	Knob, SDK
62	4A	36B63442F01	Knob, Program
63	4A	36B63441F01	Knob, Push Switch
64	5A	36A63443F01	Knob, Bass and Treble
65	5A	36B63448F01	Knob, Volume (A)
66	5A	36B63449F01	Knob, Volume (B)
67	5D	*	Insulator, Main
68	5F	*	Insulator, Fiber

* The parts without part number are not supplied.

Exploded View (General)


1
2
3
4
5
6
A
B
C
D
E
F
G
H
53
A
A
15
43
44
38
23
39
18
23
28
E903
E905
E902
59
60
58
46
47
49
48
23
15
42
45
29
33
52
32
E904
C
23
23
30
31
68
35
36
67
54
A
A
51
15
19
21
22
56
26
27
56
24
22
56
B
B
A
A
A
A
20
E901
15
25
15
B
B
2
50
1
C
17
15
41
15
13
45
9
10
6
11 X2
16
14
15
5
16
4
12
15
62
55
63 X3
61
7
3
8
37
34
40
15
66
65
64
57

Packing Method View



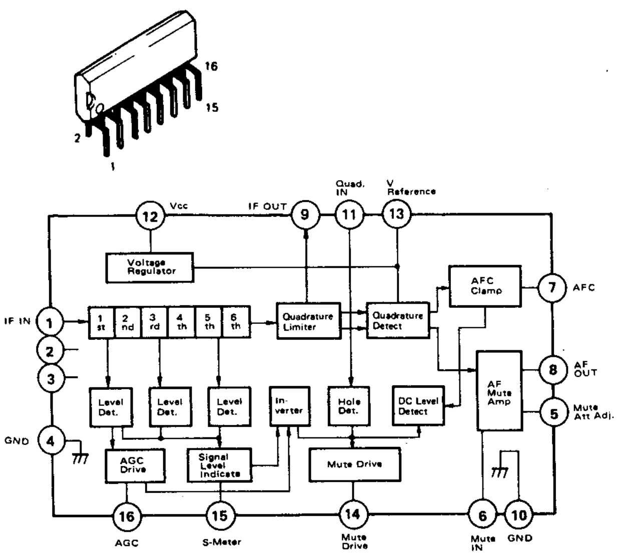
Packing Parts List

Symbol No.	Part No.	Description
Packing Assembly Parts		
101	01V66500F55	Assy., Kit Installation
101-1	02B47353F01	Nut, Hex. (M5)
101-2	03S40012G66	Screw, Tapping (M5x20)
101-3	03B44963F03	Bolt, Hex. w/Washer (M5x10)
101-4	45A41684U01	Arm, Adapter
101-5	46A42363F01	Stud, Bolt
101-6	56B40230G27	Sack, Polyethylene
101-7	65A40348G04	Fuse, 3A
101-8.	65A40348G10	Fuse, 7A
102	01V68400F18	Assy., Kit Bracket
102-1	07B61917F01	Bracket, Hand
102-2	07B61917F02	Bracket, Hand
102-3	56B40230G27	Sack, Polyethylene
102-4	01T62343F01	Assy., Earth Wire
103	01T68148F01	Assy., Kit Wire
104	15C55241F01	Inner Case
105	33B67735F01	Face Plate
106	07B64552F01	Bracket, Strap Receiver
107	56B40230G07	Sack, Polyethylene
108	64B66016F04	Panel, Cassette Assy.
109	68P67499F18	Owner's Manual (7245T)
110	56S60227F80	Carton, Packing (Individual)
111	56D68074F01	Tray, Packing
112	56D68074F02	Tray, Packing
Labels		
	54B42124G01	Serial No.[Chassis Side (R), Carton (Ind.)]
	54B60911F69	Composite, (Bottom Cover)

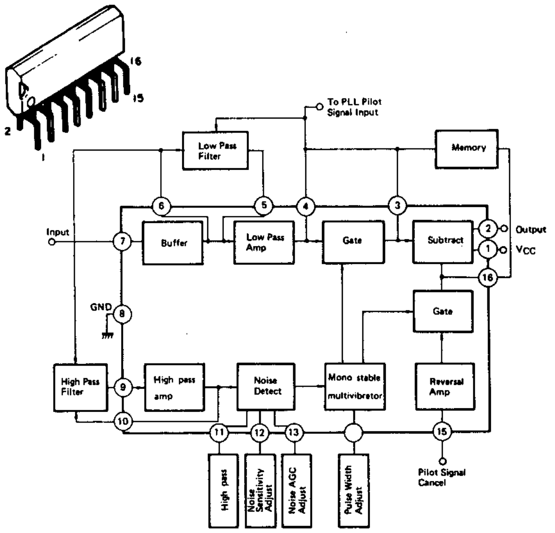
* The parts without part number are not supplied.

Semiconductors Lead Identifications

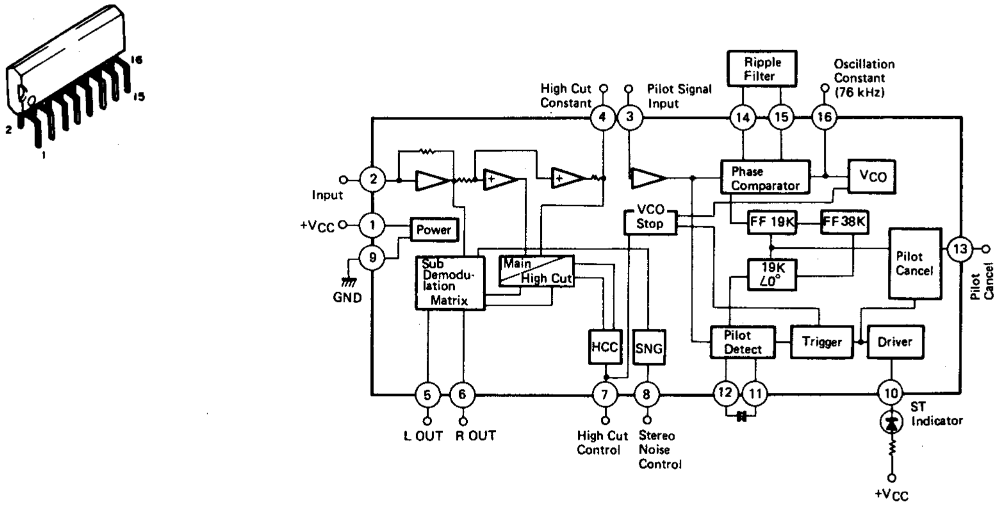
LA1140 IC001


16
15
2
1
Vcc
IF OUT
Quad. IN
V Reference
12
9
11
13
Voltage Regulator
AFC Clamp
7
AFC
IF IN
1
1 st
2 nd
3 rd
4 th
5 th
6 th
Quadrature Limiter
Quadrature Detect
2
3
AF Mute Amp
8
AF OUT
5
Mute Att Adj.
Level Det.
Level Det.
Level Det.
In-verter
Hole Det.
DC Level Detect
GND
4
AGC Drive
Signal Level Indicate
Mute Drive
16
15
14
6
10
AGC
S-Meter
Mute Drive
Mute IN
GND

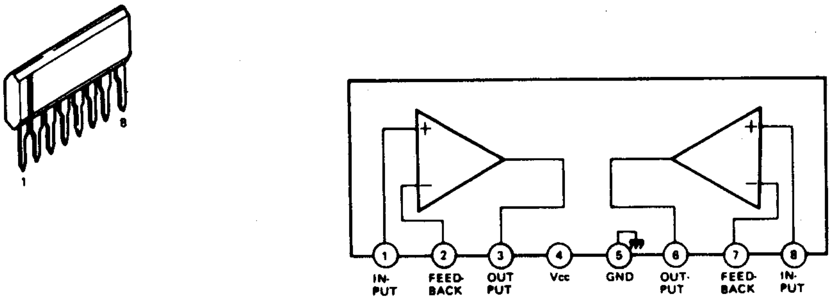
LA2110 IC002


16
15
2
1
To PLL Pilot Signal Input
Low Pass Filter
Memory
6
5
4
3
Input
7
Buffer
Low Pass Amp
Gate
Subtract
2
Output
1
Vcc
16
Gate
GND
8
High Pass Filter
9
High pass amp
Noise Detect
Mono stable multivibrator
Reversal Amp
10
11
12
13
15
High pass
Noise Sensitivity Adjust
Noise AGC Adjust
Pulse Width Adjust
Pilot Signal Cancel

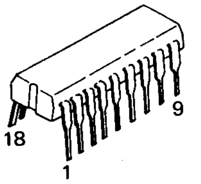
LA3376 IC003

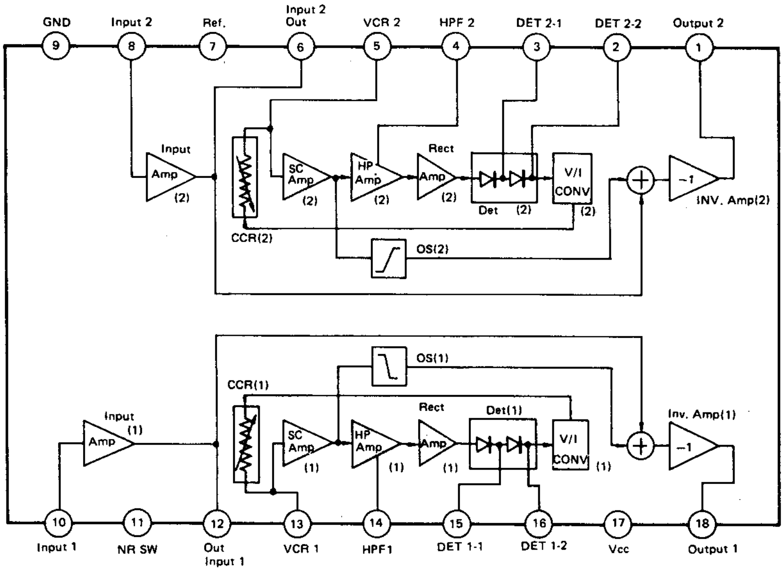

16
15
2
1
Ripple Filter
Oscillation Constant (76 kHz)
High Cut Constant
Pilot Signal Input
4
3
14
15
16
Input
2
Phase Comparator
VCO
+Vcc
1
Power
VCO Stop
FF 19K
FF 38K
9
GND
Sub Demodu-lation Matrix
Main High Cut
19K ∠0°
Pilot Cancel
13
Pilot Cancel
HCC
SNG
Pilot Detect
Trigger
Driver
5
6
7
8
12
11
10
L OUT
R OUT
High Cut Control
Stereo Noise Control
ST Indicator
+Vcc

M51522AL IC201

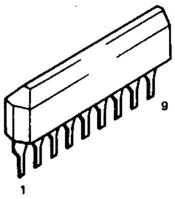

8
1
1
2
3
4
5
6
7
8
IN-PUT
FEED-BACK
OUT PUT
Vcc
GND
OUT-PUT
FEED-BACK
IN-PUT

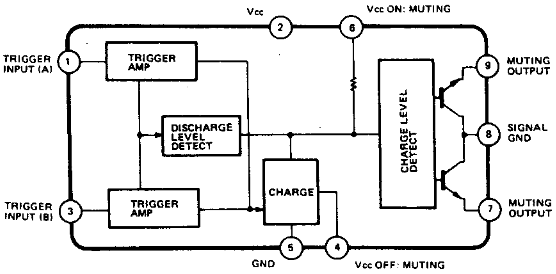
HA12046 IC301



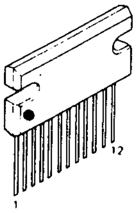

GND
Input 2
Ref.
Input 2 Out
VCR 2
HPF 2
DET 2-1
DET 2-2
Output 2
9
8
7
6
5
4
3
2
1
Input Amp (2)
CCR(2)
SC Amp (2)
HP Amp (2)
Rect Amp (2)
Det (2)
V/I CONV (2)
OS(2)
-1
INV. Amp(2)
OS(1)
CCR(1)
Input Amp (1)
SC Amp (1)
HP Amp (1)
Rect Amp (1)
Det(1)
V/I CONV (1)
Inv. Amp(1)
-1
10
11
12
13
14
15
16
17
18
Input 1
NR SW
Out Input 1
VCR 1
HPF1
DET 1-1
DET 1-2
Vcc
Output 1

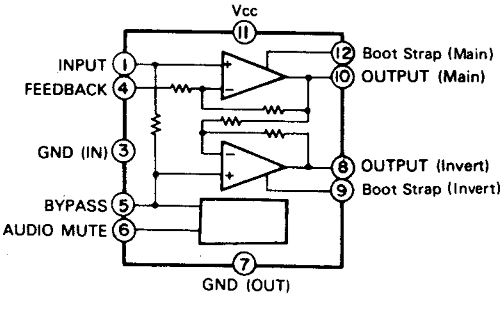
TA7324P IC401



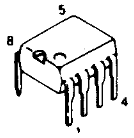

Vcc
Vcc ON: MUTING
2
6
TRIGGER INPUT (A)
1
TRIGGER AMP
DISCHARGE LEVEL DETECT
CHARGE
CHARGE LEVEL DETECT
TRIGGER INPUT (B)
3
TRIGGER AMP
9
MUTING OUTPUT
8
SIGNAL GND
7
MUTING OUTPUT
5
4
GND
Vcc OFF: MUTING

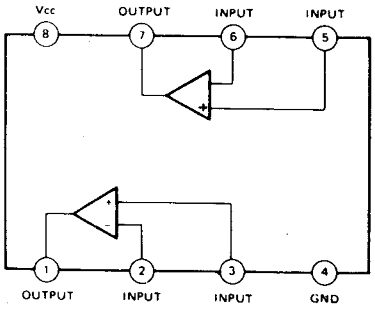
MB3731M IC501, 502



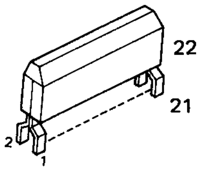

Vcc
11
INPUT 1
FEEDBACK 4
GND (IN) 3
BYPASS 5
AUDIO MUTE 6
7
GND (OUT)
12 Boot Strap (Main)
10 OUTPUT (Main)
8 OUTPUT (Invert)
9 Boot Strap (Invert)
+
−

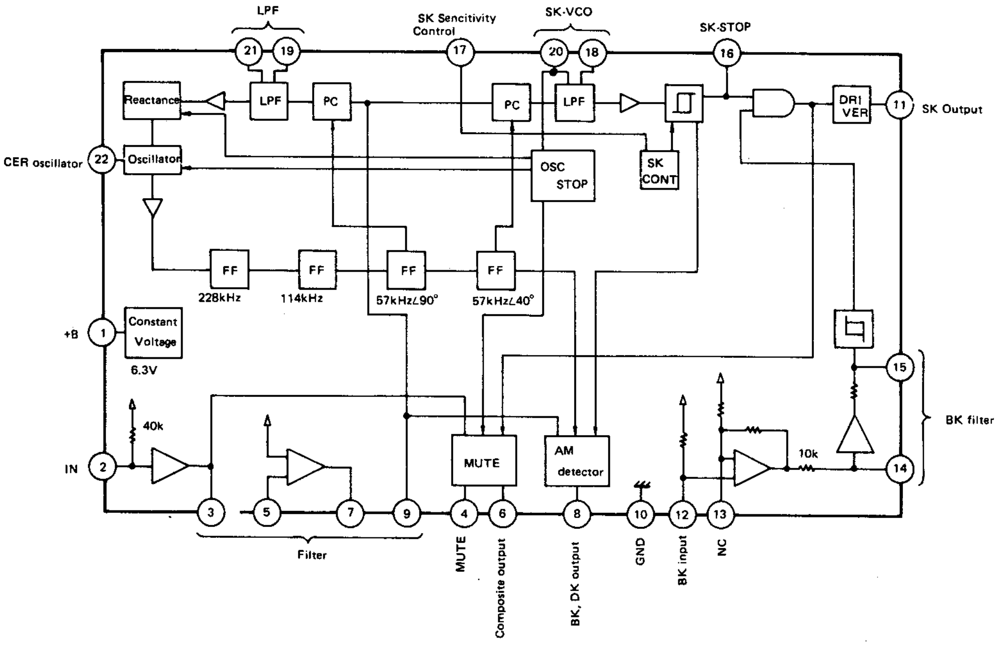
µPC 4557C IC503



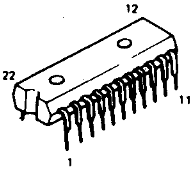

Vcc
OUTPUT
INPUT
INPUT
8
7
6
5
1
2
3
4
OUTPUT
INPUT
INPUT
GND

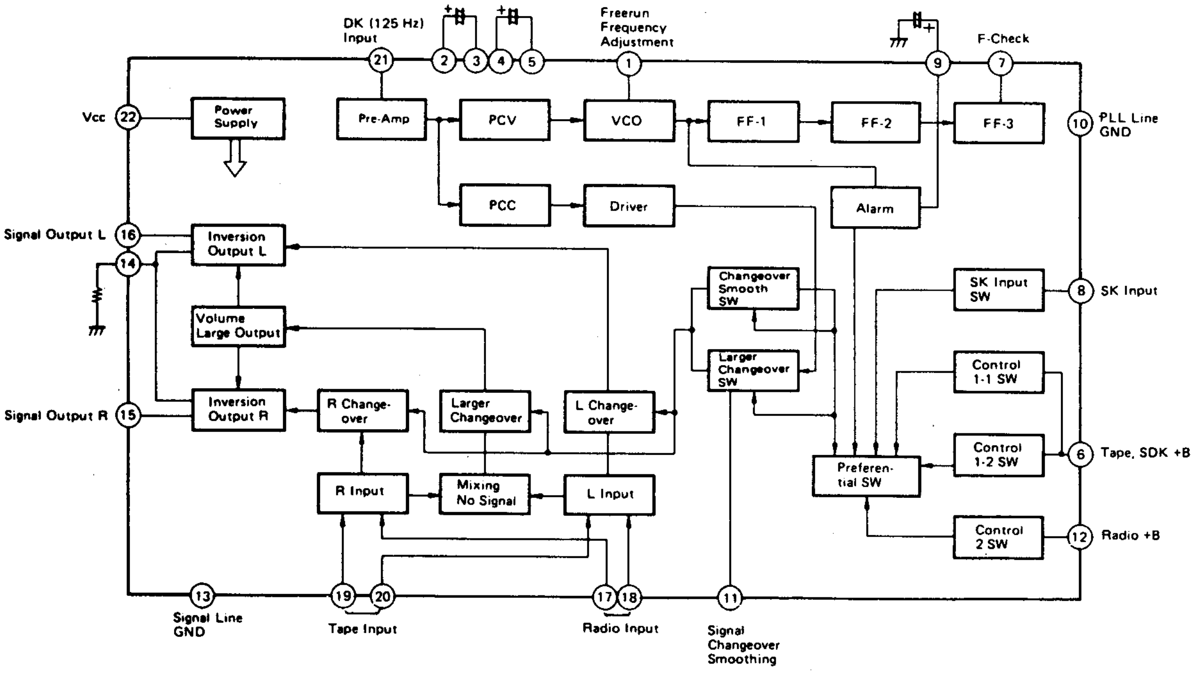
LA2220 IC601



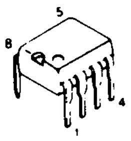

LPF
SK Sencitivity Control
SK-VCO
SK-STOP
21
19
17
20
18
16
Reactance
LPF
PC
PC
LPF
DRIVER
11
SK Output
CER oscillator
22
Oscillator
OSC STOP
SK CONT
FF
FF
FF
FF
228kHz
114kHz
57kHz∠90°
57kHz∠40°
+B
1
Constant Voltage
6.3V
15
BK filter
40k
IN
2
MUTE
AM detector
10k
14
3
5
7
9
4
6
8
10
12
13
Filter
MUTE
Composite output
BK, DK output
GND
BK input
NC

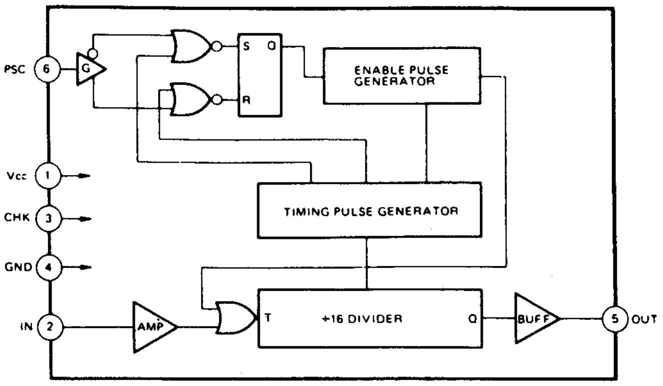
LA2211 IC602



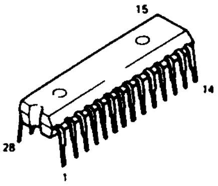

DK (125 Hz) Input
Freerun Frequency Adjustment
F-Check
Vcc
Power Supply
Pre-Amp
PCV
VCO
FF-1
FF-2
FF-3
PLL Line GND
PCC
Driver
Alarm
Signal Output L
Inversion Output L
Volume Large Output
Changeover Smooth SW
SK Input SW
SK Input
Larger Changeover SW
Control 1-1 SW
Signal Output R
Inversion Output R
R Change-over
Larger Changeover
L Change-over
Control 1-2 SW
Tape, SDK +B
R Input
Mixing No Signal
L Input
Preferen-tial SW
Control 2 SW
Radio +B
Signal Line GND
Tape Input
Radio Input
Signal Changeover Smoothing
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

μPB553AC IC603




PSC
G
S
Q
R
ENABLE PULSE GENERATOR
Vcc
CHK
GND
TIMING PULSE GENERATOR
IN
AMP
T
÷16 DIVIDER
Q
BUFF
OUT
1
2
3
4
5
6

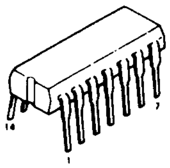
60888F01 IC604

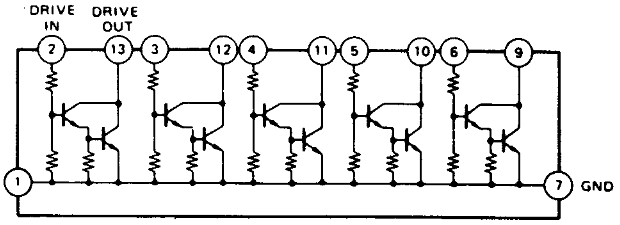


Pin No.	Symbol	Function
1	E01	Phase detector output. The output contents of terminals 1 and 2 are identical.
2	E02	
3	CE	Chip enable input
4	PSC	Prescaler control terminal. µPB553AC is employed for prescaler.
5	X1	Crystal oscillator terminal of 4.5 MHz.
6	X2	
7	SD	Station detector input. Stop input when autotuning is used.
8	MUTE	Mute output to prevent noise when the frequency is being converted.
9	D1	Digit signal output for frequency display and time display. D1: Symbol digit
10	D2	
11	D3	
12	D4	

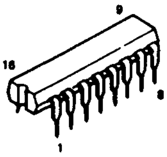
Pin No.	Symbol	Function
13	D5	D2: Low-order digits D5: High-order digits
14	V_{DD}	Power supply terminal to supply DC +5DC ±0.5V
15	SEGg	Segment signal output for frequency display and time display.
16	SEGf	
17	SEGe	
18	SEGd	
19	SEGc	
20	SEGb	
21	SEGa	
22	K3	Input terminal for key matrix.
23	K2	
24	K1	
25	K0	
26	FM	FM programmable counter input
27	GND	Grounding terminal
28	AM	AM programmable counter input

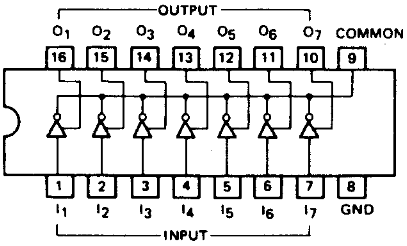
UPA53C IC605





TD62506P IC606

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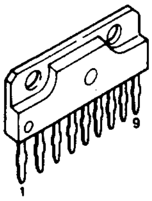
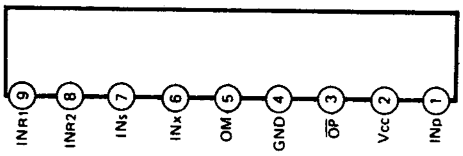
1 2 3 4 5 6 7 8
I1 I2 I3 I4 I5 I6 I7 GND
INPUT

52421F01 IC701

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8 INR2
7 INs
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4 GND
3 ŌP
2 Vcc
1 INp

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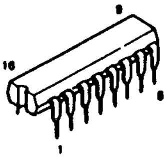

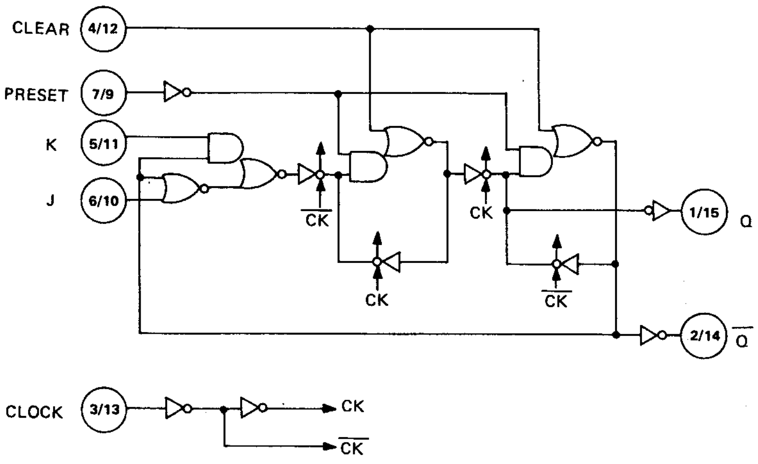
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K 5/11
J 6/10
CK
CK
CK
CK
1/15 Q
2/14 Q̄
CLOCK 3/13
CK
CK

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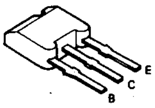
2SD638	Q801-803
2SB641	Q006, Q611-616
2SD661	Q618, Q619



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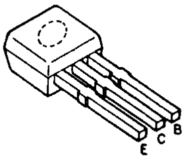

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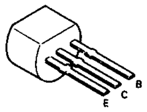

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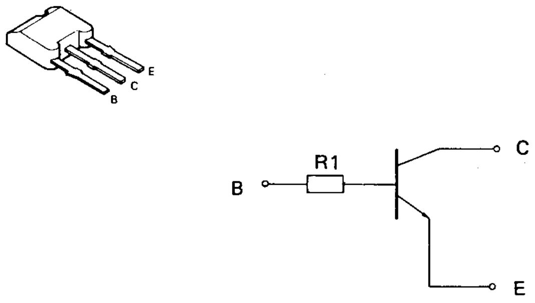
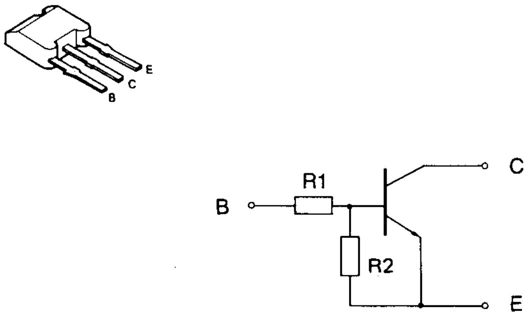
UN1217 Q101, Q102, Q601, Q605, Q805-807



UN1211(48T62540F01) Q610, Q602, Q609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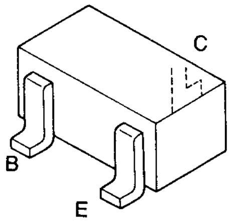
2SC2412 Q201, Q202, Q608



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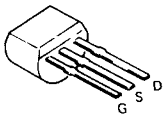
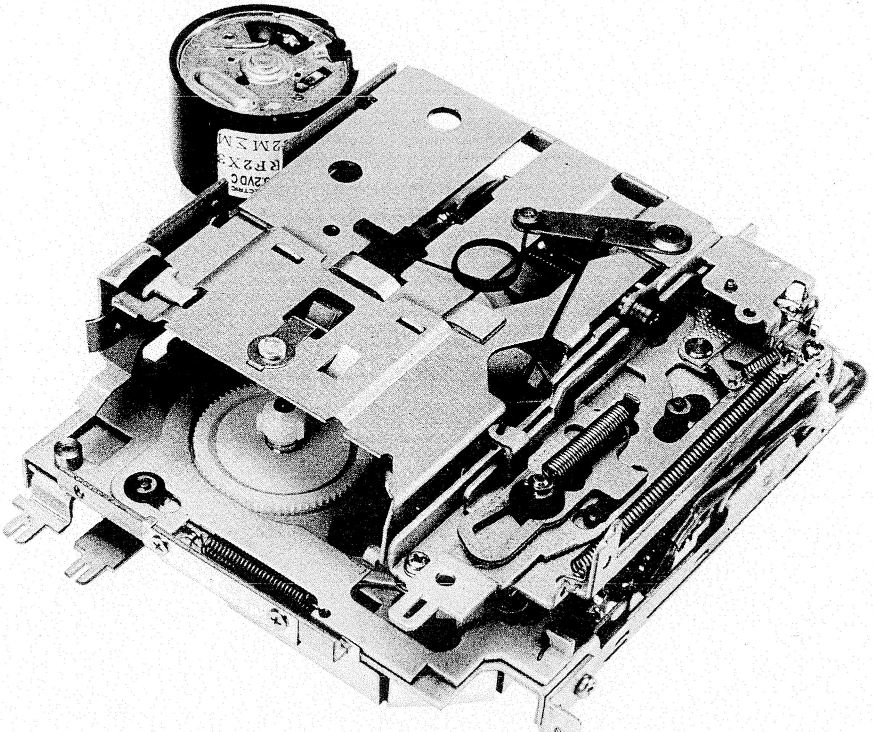


ALPINE **SERVICE MANUAL**

Exploded View & Parts List
For
Cassette Deck Mechanism

— ADDENDUM & REVISED —



GW SERIES

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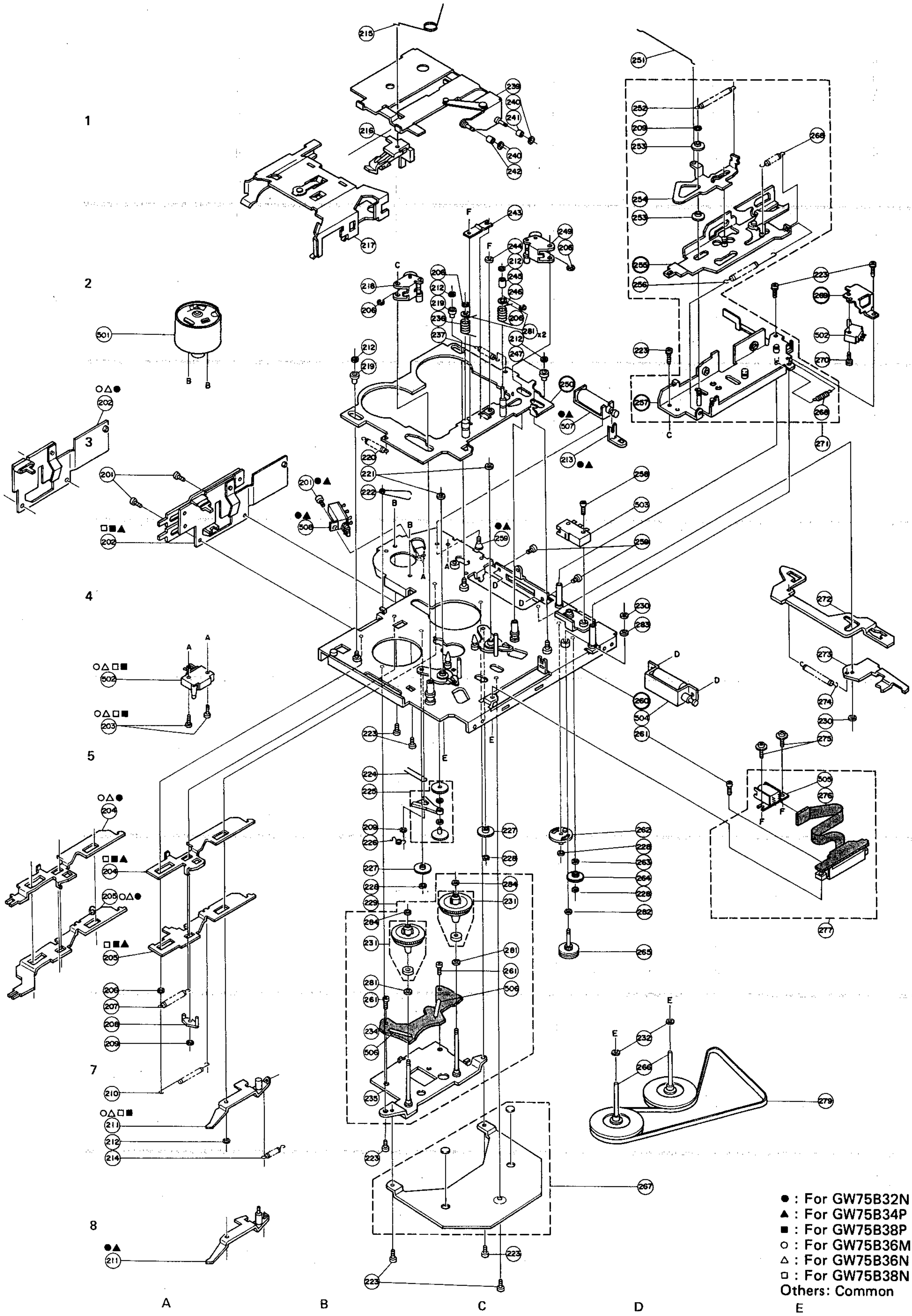
Exploded View (GW75B36M/36N/38N/32N/34P/38P)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● : For GW75B32N
▲ : For GW75B34P
■ : For GW75B38P
○ : For GW75B36M
△ : For GW75B36N
□ : For GW75B38N
Others: Common

Parts List (GW75B36M/36N/38N/32N/34P/38P)

The alpha-numeric codes suffixed to the numeric symbol numberes in the parts list dentify the location codes of the respective components in the exploded views.

GW75B36M/36N/38N/32N/34P/38P

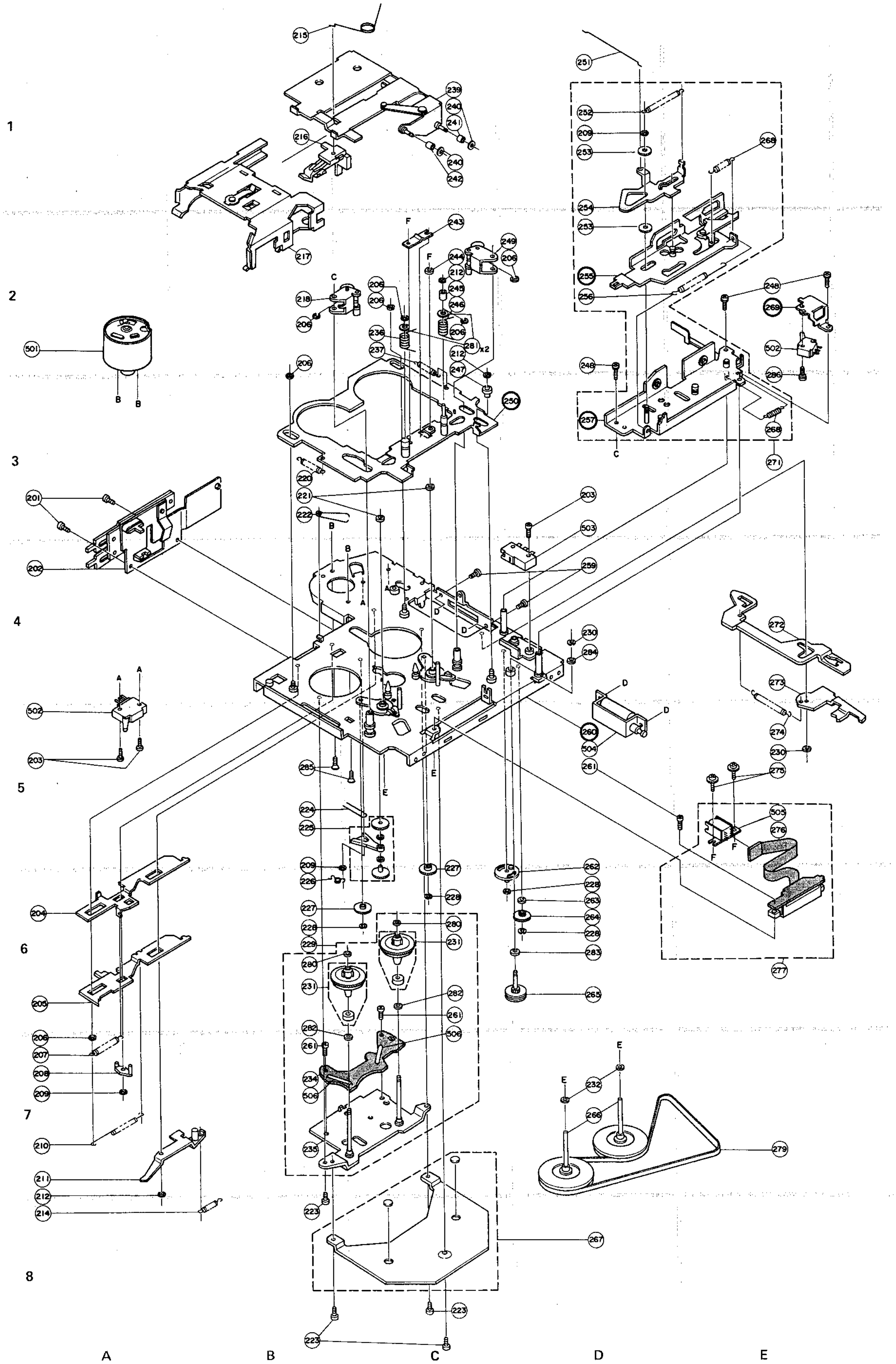
Symbol No.	Index	Part No.	Description
201	3A	03S44205G30	Screw, Pan (M2.6x4)
●○△202	4A	01A41659F01	Assembly, Rivet, Guide Bracket
□		01A41844F01	Assembly, Rivet Guide Bracket
▲■		01A56682F01	Assembly, Rivet Guide Bracket
203	5A	03S68259F16	Screw, Pan (M2x6.5)
○△204	6A	45C41236F01	Lever, REW
□■		45C41236F02	Lever, REW
●		45C41236F04	Lever, REW
▲		45C41236F05	Lever, REW
○△205	6A	45C41235F01	Lever, FF
□■		45C41235F02	Lever, FF
●		45C41235F04	Lever, FF
▲		45C41235F05	Lever, FF
206		04C42091G04	Ring, "E" (M3)
207	7A	41B41559F10	Spring
208	7A	45A45326F01	Link, R/F
209		04C42091G05	Ring, "E" (M2)
210	7A	41B41559F09	Spring
○△□■211	7A	01A63059F01	Assembly, Rivet, Lock Lever
●▲		01A65341F01	Assembly, Rivet Lock Lever
212		04C42091G06	Ring, "E" (M1.5)
●▲213	3D	45A45618F01	Lever, Mute Solenoid
214	7A	41B41559F16	Spring
215	1B	41A41590F03	Spring, Turn
216	1B	45B45858F01	Guide, Cassette
217	2B	01A69106F01	Assembly, Cassette Holder
218	2B	01T51012F01	Assembly, Pinch Roller
219	2B,2C	49A41005F01	Roller, Head Base
220	3B	41B41559F05	Spring
221	3B	43A44303P03	Washer, Oil Shield (M1.9)
222	3B	41A43244F01	Spring, B.T.
223		03D40014G12	Screw, W/Washer (M2.6x4)
224	5B	41A41393F01	Spring, R/F Idler Arm
225	5B	01C41353F01	Assembly, R/F Idler
226	6B	41A42613F01	Spring, R/F Idler
227	5C,6B	44A41406F01	Gear, Take Up
228		04A41345P01	Washer, Lock (M1.2)
229	6B	01V71100F30	Assembly, Reel Bracket
230		04A41345P02	Washer, Lock (M1.7)
231	6B,6C	01V71800F76	Assembly, Reel Magnet
232		04S40075G06	Washer, Polyslider (M2.1)
234	7B	84A69210F01	P.C.B., Reed SW
235	7B	01A41656F01	Assembly, Reel Shaft Bracket
236	2C	41A41453F02	Spring, Pinch Roller
237	2C	41B41559F04	Spring
239	1C	01A45981F01	Assembly, Rivet, Plate Base
240	1C	04A41345P21	Washer Lock (M1.7)
241	1C	43A41072F02	Spacer
242	1C	43A41072F03	Spacer
243	2C	41A45638F01	Spring, Head Adjust
244	2C	04S40075G07	Washer, Flat (M2.1)
245	2C	43A41079F01	Spacer

NOTE: (1) The parts without part numbers are not supplied.
(2) ○ : For GW75B36M, △ : For GW75B36N, □ : For GW75B38N, Others: Common
● : For GW75B32N, ▲ : For GW75B34P, ■ : For GW75B38P

Symbol No.	Index	Part No.	Description
246	2C	41A41453F01	Spring, Pinch Roller
247	2C	49A43395F01	Roller, Head Base
249	2D	01T51011F01	Assembly, Pinch Roller
251	1D	45A41392F01	Link, Connection
252	1D	41B41559F12	Spring
253	1D,2D	43A42872F01	Spacer
254	1D	45B41534F01	Lever, Sub
256	2D	41C45984F01	Spring
258	3D	03S56479F02	Screw, Bind (M2.3x8)
259	4D	03S56479F05	Screw, Countersink (M2x4)
261	5D	03S43997P62	Screw, Round (M2.6x3)
262	5D	44A51604F01	Gear, Change
263	6D	04S40075G03	Washer, Polyslider (M1.7)
264	6D	44A51603F01	Gear, Reverse Idler
265	6D	44A51602F01	Gear, Pulley Wheel
266	7D	01T42014F01	Assembly, Flywheel
267	8D	01V41500F39	Assembly, Flywheel Bracket
268	1E,3E	41C45984F12	Spring
270	2E	03D40014G15	Screw, W/Washer (M2x8)
271	3E	01V53600F83	Assembly, Eject Lever
272	4E	45B51596F01	Lever, R/F Release
273	4E	45A51599F01	Lever, Lock Reverse
274	5E	41C45984F13	Spring
275	5E	03S40019G03	Screw, F-Lock (M2x4)
276	5E	01V00100S50	Assembly, SW P.C.B.
△□277	6E	01V53600F85	Assembly, Head and SW
○		01V53800F89	Assembly, Head and SW
●		01V61100F79	Assembly, Head and SW
▲		01V64200F98	Assembly, Head and SW
■		01V74600F07	Assembly, Head and SW
279	7E	42A40969F01	Belt
281		04A66841F01	Spacer, Spring Pinch (M5)
282		04S40075G53	Washer, Polyslider (M2.2)
283		04A41345P12	Washer, Lock (M1.7)
284		04S40075G45	Washer, Polyslider (M2.1)
285		04S40075G46	Washer, Polyslider (M1.9)
Miscellaneous Parts			
501	2A	01V61500F28	Assembly, Motor
502	2E,4A	40T41665F01	Switch, Slide
503	3D	40T52216F01	Switch, Micro
504	5D	01T66520F01	Assembly, Reverse Solenoid
●△□505	5E	88T50977F01	Head, Playback
○		88T45248F01	Head, Playback
▲■		88T74470F01	Head, Playback
506	6C,7B	40T40641U02	Switch, Reed
●▲		01T66519F01	Assembly, Sensor Solenoid
●▲		40T43144U03	Switch, Push

NOTE: (1) The parts without part numbers are not supplied.
(2) ○ : For GW75B36M, △ : For GW75B36N, □ : For GW75B38N, Others: Common
● : For GW75B32N, ▲ : For GW75B34P, ■ : For GW75B38P

Exploded View (GW75B38Z)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Parts List (GW75B38Z)

The alpha-numeric codes suffixed to the numeric symbol numbers in the parts list dentify the location codes of the respective components in the exploded views.

Symbol No.	Index	Part No.	Description
201	3A	03S44205G30	Screw, Pan (M2.6x4)
202	4A	01A41844F01	Assembly, Rivet, Guide Bracket
203	5A	03S68259F06	Screw, Pan (M2.3x8)
204	6A	45C73930F02	Lever, REW
205	6A	45C73929F02	Lever, FF
206		04C42091G04	Ring, "E" (M3)
207	6A	41B41559F10	Spring
208	7A	45A45326F01	Link, R/F
209		04C42091G05	Ring, "E" (M2)
210	7A	41B41559F09	Spring
211	7A	01A63059F01	Assembly, Rivet, Lock Lever
212		04C42091G06	Ring, "E" (M1.5)
214	8A	41B41559F16	Spring
215	1B	41A41590F01	Spring, Turn
216	1B	45B45858F01	Guide, Cassette
217	2B	01A69106F01	Assembly, Cassette Holder
218	2B	01T71059F01	Assembly, Pinch Roller
220	3B	41B41559F05	Spring
221	3B	43A44303P03	Washer, Oil Shield (M1.9)
222	3B	41A43244F01	Spring, B.T.
223		03D40014G12	Screw, W/Washer (M2.6x4)
224	5B	41A41393F01	Spring, R/F Idler Arm
225	5B	01C41353F01	Assembly, R/F Idler
226	6B	41A42613F01	Spring, R/F Idler
227	6B,6C	44A41406F01	Gear, Take Up
228		04A41345P01	Washer, Lock (M1.2)
229	6B	01V71100F30	Assembly, Reel Bracket
230		04A41345P02	Washer, Lock (M1.7)
231	6B,6C	01V71800F76	Assembly, Reel Magnet
232		04S40075G06	Washer, Polyslider (M2.1)
234	7B	84A69210F01	P.C.B., Reed SW
235	7B	01A41656F01	Assembly, Reel Shaft Bracket
236	2C	41A41453F02	Spring, Pinch Roller
237	2C	41B41559F04	Spring
239	1C	01A71795F01	Assembly, Rivet, Plate Base
240	1C	04A41345P21	Washer Lock (M1.7)
241	1C	43A41072F02	Spacer
242	1C	43A41072F03	Spacer
243	2C	41A45638F01	Spring, Head Adjust
244	2C	04S40070G56	Washer, Flat (M2.1)
245	2C	43A41079F01	Spacer
246	2C	41A41453F01	Spring, Pinch Roller
247	2C	49A43395F01	Roller, Head Base
248		03D40014G06	Screw, W/Washer (M2.6x5)
249	2D	01T71060F01	Assembly, Pinch Roller
251	1D	45A41392F01	Link, Connection
252	1D	41B41559F12	Spring
253	1D,2D	04S40070G06	Washer, Flat (M3.8)
254	1D	45B61534F01	Lever, Sub

NOTE: * The parts without part numbers are not supplied.

Symbol No.	Index	Part No.	Description
256	2D	41C45984F10	Spring
259	4D	03S68259F15	Screw, P-Lock (M2x4)
261	5D	03S43997P62	Screw, Round (M2.6x3)
262	6D	44A51604F01	Gear, Change
263	6D	04S40075G03	Washer, Polyslider (M1.7)
264	6D	44A51603F01	Gear, Reverse Idler
265	6D	44A51602F01	Gear, Pulley Wheel
266	7D	01T42014F03	Assembly, Flywheel
267	8D	01V41500F39	Assembly, Flywheel Bracket
268	1E,3E	41C45984F12	Spring
271	3E	01V71800F70	Assembly, Eject Lever
272	4E	45B51596F01	Lever, R/F Release
273	4E	45A51599F01	Lever, Lock Reverse
274	5E	41C45984F13	Spring
275	5E	03S40019G03	Screw, F-Lock (M2x4)
276	5E	01V00100S50	Assembly, SW P.C.B.
277	6E	01V71800F75	Assembly, Head and SW
279	7E	42A40969F01	Belt
280		04A41345P12	Washer Lock (M1.7)
281		04A66841F01	Spacer, Spring Pinch (M5)
282		04S40075G53	Washer, Polyslider (M2.2)
283		04S40075G45	Washer, Polyslider (M2.1)
284		04S40075G46	Washer, Polyslider (M1.9)
285		03S68259F13	Screw, P-Lock (M2.6x3)
286		03S68259F16	Screw, P-Lock (M2x6.5)
Miscellaneous Parts			
501	2A	01V71800F71	Assembly, Motor
502	2E,4A	40T41665F01	Switch, Slide
503	3D	40T52216F01	Switch, Micro
504	5D	01T66520F01	Assembly, Reverse Solenoid
505	5E	88T71411F01	Head, Playback
506	7B,7C	40T40641U02	Switch, Reed

NOTE: * The parts without part numbers are not supplied.

Replacement of Mechanical Parts

1. Removal of Cassette Deck

(1) Remove cassette deck by following the disassembly instructions.

2. Removal of Eject Lever Assembly

(1) Remove the three screws marked "○" in Figure 1.

(2) Remove eject lever assembly.

3. Removal of Deck Cover

(1) Remove the one screw marked "★" in Figure 5.

4. Removal of Deck Front Bracket

(The deck front bracket is not provided to some models.)

(1) Remove two screws marked "◇" in Figure 5.

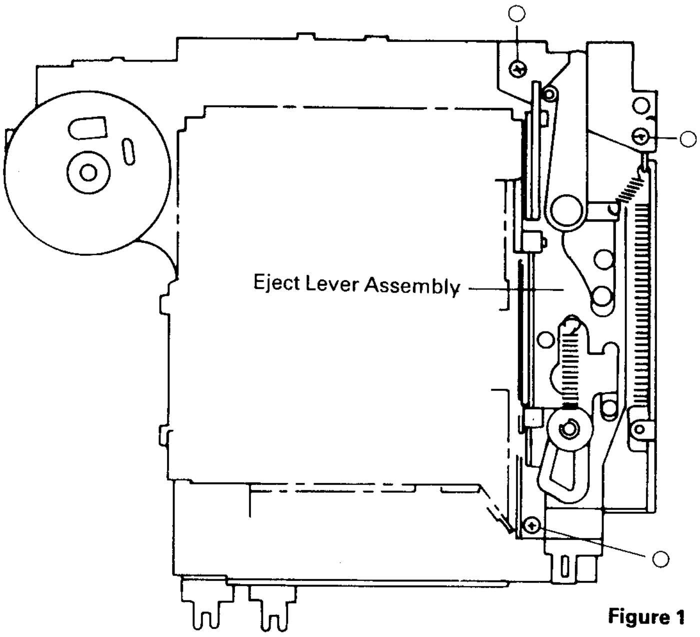


Figure 1

5. Replacement of Head

(1) Remove eject lever assembly.

(2) Remove the solder from the screw marked "△" and then remove that screw and the two screws marked "□" in Figure 2. Then remove the head and slide switch P.C. board.

(3) Remove head from the P.C. board.

(4) Replace the head, fix the new head and slide switch P.C. board loosely with three screws and assemble in the reverse order of disassembly.

(5) After assembling, adjust the position of the head and switch P.C. board as shown in Figure 3 so that the slide switch is equidistant from "normal" and "reverse". After adjusting, solder the screw marked "△" in Figure 2.

(6) With the test tape (MTT-114), adjust the head azimuth. (Refer to Head Azimuth Adjustment.) After adjusting, apply the Neji-lock to fix the screws.

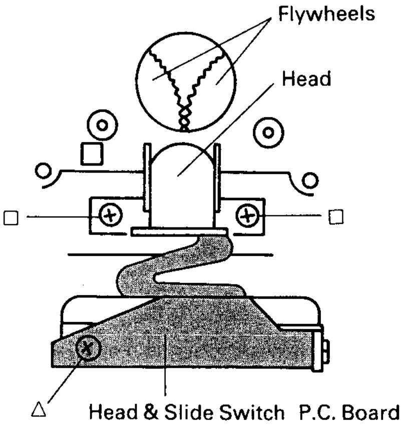


Figure 2

6. Replacement of Pinch Roller Assembly (L)

(1) Remove eject lever assembly.
(2) Remove two "E" rings and washer to remove the pinch roller assembly (L) and the pinch roller spring (L) as shown in Figure 4.
(3) Replace the pinch roller and clean it with absolute alcohol. Assemble in the reverse order of disassembly.
(4) With the test tape (MTT-111), check tape speed and wow/flutter.
(5) Remove pinch roller assembly (R) in the same manner as described above.

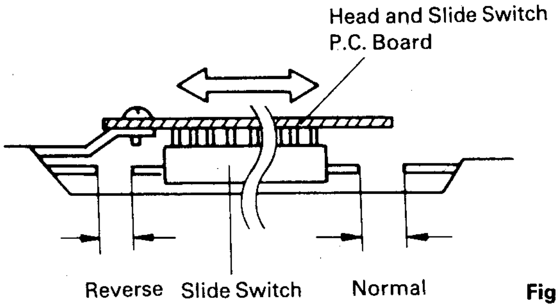

Head and Slide Switch
P.C. Board
Reverse
Slide Switch
Normal

Figure 3

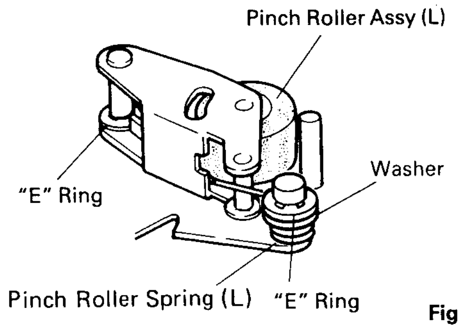

Pinch Roller Assy (L)
"E" Ring
Washer
Pinch Roller Spring (L)
"E" Ring

Figure 4

7. Replacement of Motor

(1) First remove the lead wire from the motor side.
(2) Remove two screws marked "●" in Figure 5.
(3) Replace the new motor. Assemble in the reverse order of disassembly.
(4) With the test tape (MTT-111), adjust the tape speed and check wow/flutter. (Refer to Tape Speed Adjustment.)

8. Replacement of Belt and Flywheels

(1) Remove three screws marked "X" and flywheel bracket in Figure 5 to take off the belt and the flywheel. Be careful not to lose the washers (Figure 6) as they come loose when the flywheels are removed.
(2) Replace the belt and flywheels, clean with absolute alcohol and assemble in the reverse order of disassembly.
(3) With the test tape (MTT-111), check tape speed and wow/flutter.

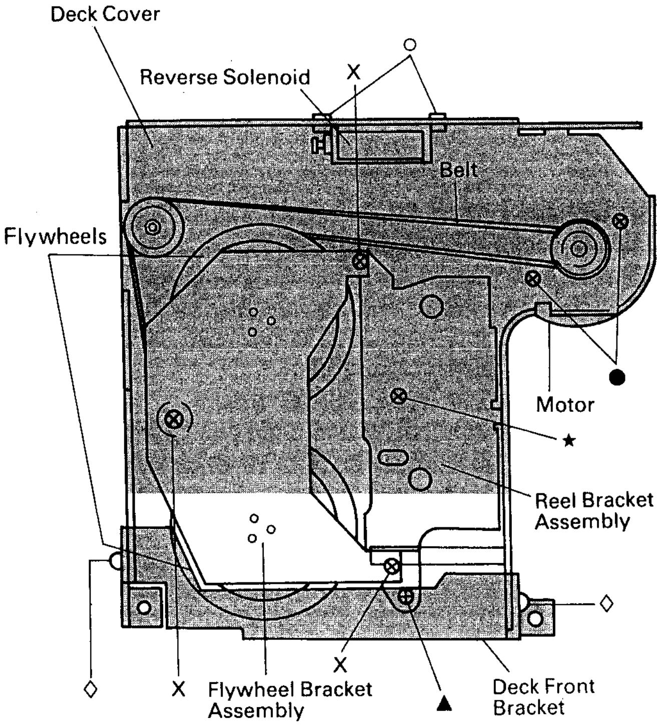

Deck Cover
Reverse Solenoid
X
○
Belt
Flywheels
●
Motor
★
Reel Bracket Assembly
◇
◇
X
Flywheel Bracket Assembly
X
▲
Deck Front Bracket

Figure 5

9. Replacement of Reed Switch P.C. Board and Reel

(1) Remove two flywheels.
(2) Remove the one screw marked "▲" in Figure 5.
(3) Remove the two screws marked "■" in Figure 6 to remove the guide bracket rivet assy.
(4) Remove B.T. spring in Figure 6 from reels and then remove the reel bracket.
(5) Remove the two screws marked "☆" in Figure 7 and disconnect the wire, remove the reed switch P.C. board.
(6) Remove the two lock washers in Figure 7 and remove the two reels.
(7) Assemble reel bracket after replacing with new reels and reed switch P.C. board. Assemble in the reverse order of disassembly, and confirm the proper positioning of the B.T. spring.
(8) With the test tape (MTT-111), check tape speed and wow/flutter.

10. Replacement of Reverse Solenoid

(1) Remove two screws marked "○" in Figure 6.
(2) Remove reverse solenoid.
(3) Replace the solenoid and assemble in the reverse order of disassembly.

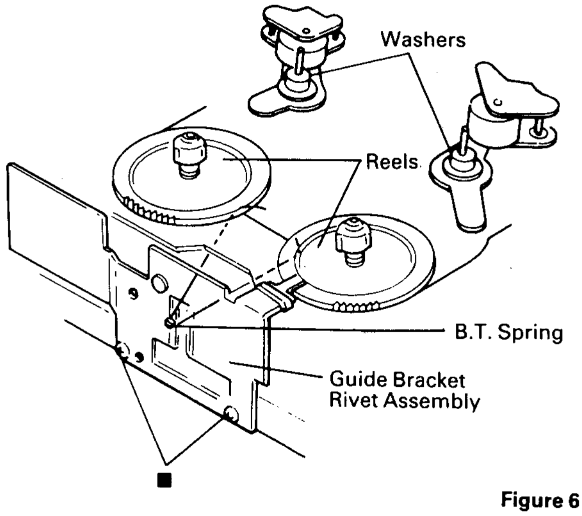

Washers
Reels
B.T. Spring
Guide Bracket
Rivet Assembly
■

Figure 6

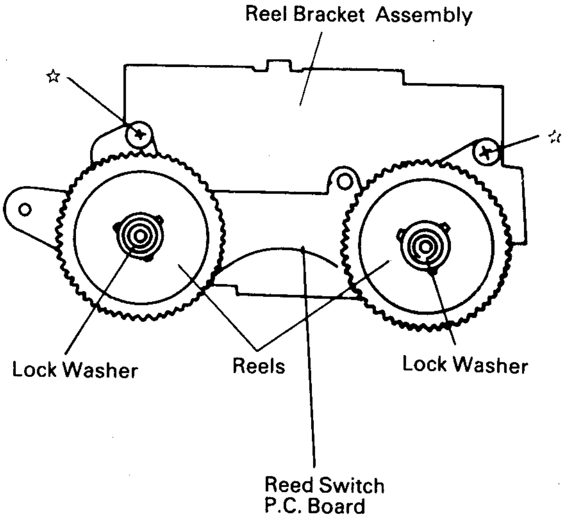
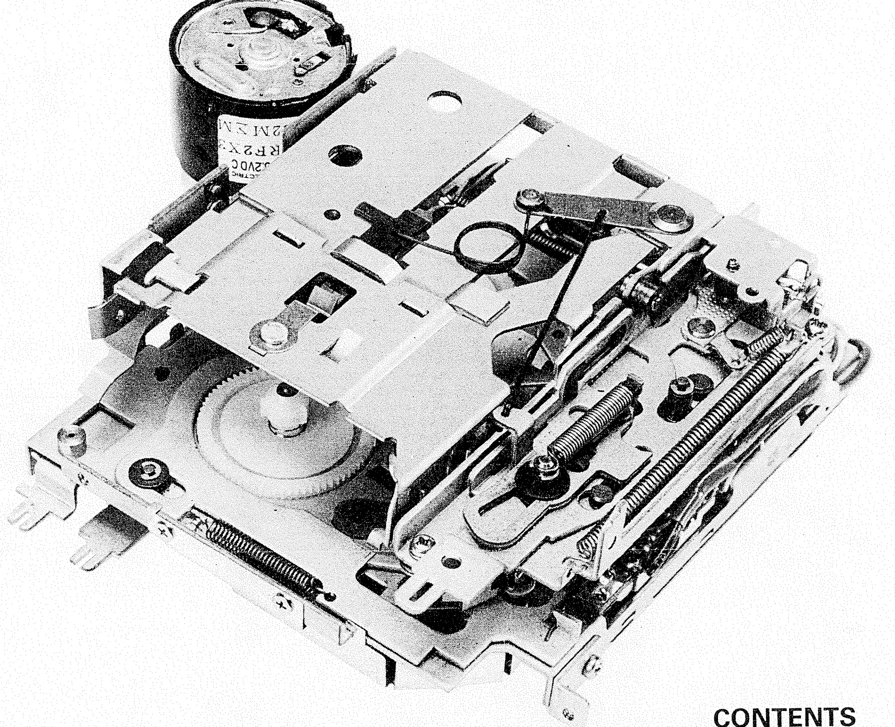

Reel Bracket Assembly
☆
☆
Lock Washer
Reels
Lock Washer
Reed Switch
P.C. Board

Figure 7

ALPINE **SERVICE MANUAL**

Exploded View & Parts List For Cassette Deck Mechanism

— ADDENDUM (GW75B38N) —
&
— REVISED —



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Exploded View 2
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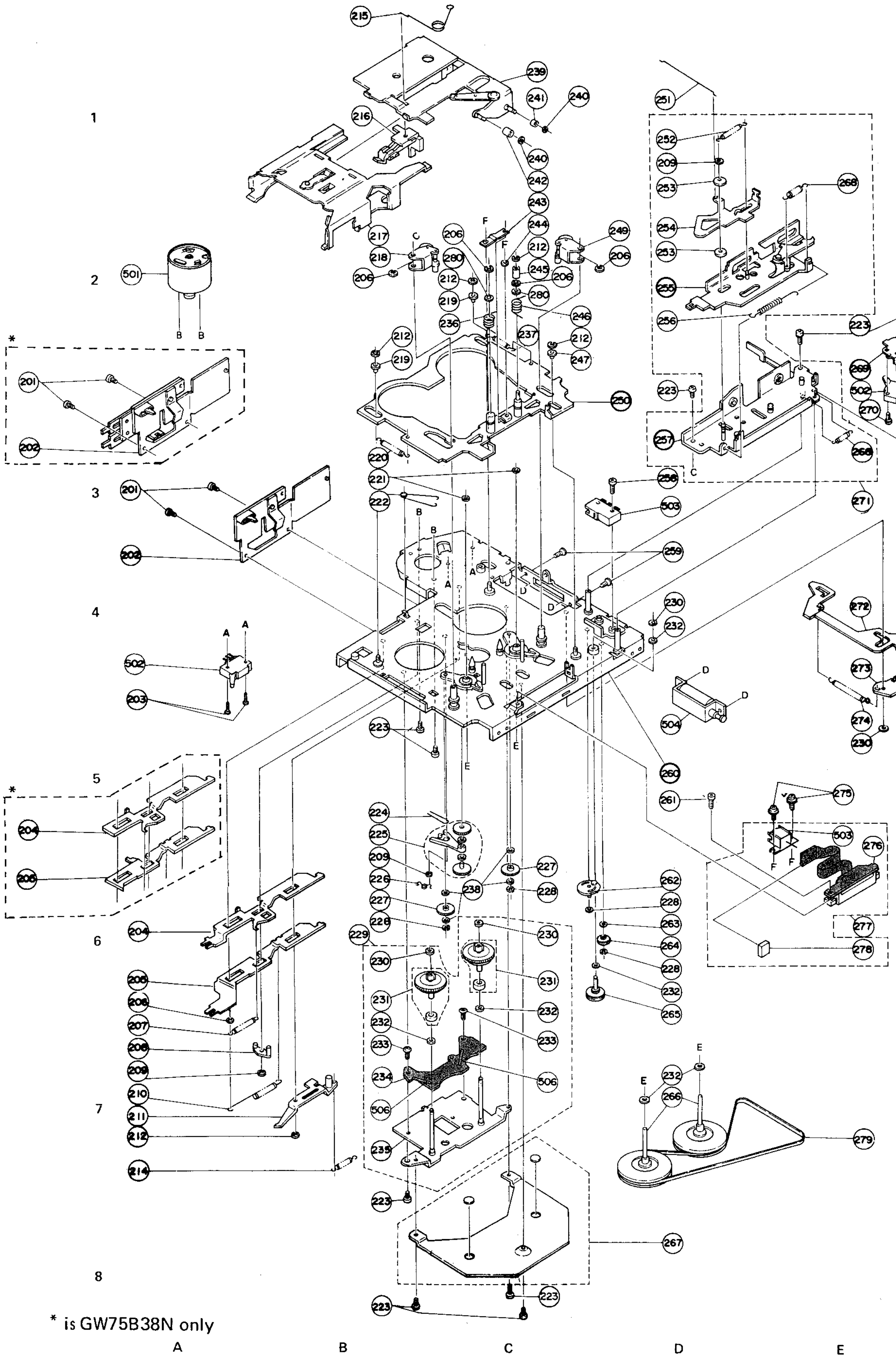
GW SERIES

Exploded View (GW75B360/36M/36N/38N)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* is GW75B38N only

Parts List (GW75B360/36M/36N/38N)

The alpha-numeric codes suffixed to the numeric symbol numbers in the parts list dentify the location codes of the respective components in the exploded views.

GW75B360/36M/36N/38N

Symbol No.	Part No.	Description	Models			
			360	36M	36N	38N
201 3A	03S44205G30	Screw, Pan (M2.6x4)	○	○	○	○
202 4A	01A41659F01	Assy., Rivet, Guide Bracket	○	○	○	—
	01A41844F01	Assy., Rivet Guide Bracket	—	—	—	○
203 5A	03S56479F04	Screw, Pan (M2x7)	○	○	○	○
204 6A	45C41236F01	Lever, REW	○	○	○	—
	45C41236F02	Lever, REW	—	—	—	○
205 6A	45C41235F01	Lever, FF	○	○	○	—
	45C41235F02	Lever, FF	—	—	—	○
206	04C42091G04	Ring, "E" (M3)	○	○	○	○
207 6A	41B41559F10	Spring	○	○	○	○
208 7A	45A45326F01	Link, R/F	○	○	○	○
209	04C42091G05	Ring, "E" (M2)	○	○	○	○
210 7A	41B41559F09	Spring	○	○	○	○
211 7A	01A45979F01	Assy., Rivet, Lock Lever	○	○	○	○
212	04C42091G06	Ring, "E" (M1.5)	○	○	○	○
214 7A	41B41559F16	Spring	○	○	○	○
215 1B	41A41590F01	Spring, Turn	○	○	○	○
216 1B	45B45858F01	Guide, Cassette	○	○	○	○
217 2B	01A41658F01	Assy., Cassette Holder	○	○	○	○
218 2B	01T51012F01	Assy., Pinch Roller	○	○	○	○
219 2B, 2C	49A41005F01	Roller, Head Base	○	○	○	○
220 3B	41B41559F05	Spring	○	○	○	○
221 3B	43A44303P03	Washer, Oil Shield (M1.9)	○	○	○	○
222 3B	41A43244F01	Spring, B.T.	○	○	○	○
223	03C40014G12	Screw, w/Washer (M2.6x4)	○	○	○	○
224 5B	41A41393F01	Spring, R/F Idler Arm	○	○	○	○
225 5B	01C41353F01	Assy., R/F Idler	○	○	○	○
226 6B	41A42613F01	Spring, R/F Idler	○	○	○	○
227 6B, 6C	44A41406F01	Gear, Take Up	○	○	○	○
228	04A41345P01	Washer, Lock (M1.2)	○	○	○	○
229 6B	01V53600F86	Assy., Reel Bracket	○	○	○	○
230	04A41345P02	Washer, Lock (M1.7)	○	○	○	○
231 6B, 6C	01V41500F38	Assy., Reel Magnet	○	○	○	○
232	04S40075G06	Washer, Polyslider (M2.1)	○	○	○	○
233 7B, 7C	03S40019G71	Screw, F-Lock (M2.6x3)	○	○	○	○
234 7B	84A41741F01	P.C.B., Reed SW	○	○	○	○
235 7B	01A41656F01	Assy., Reel Shaft Bracket	○	○	○	○
236 2C	41A41453F02	Spring, Pinch Roller	○	○	○	○
237 2C	41B41559F04	Spring	○	○	○	○
238 6C	04S40075G02	Washer, Polyslider (M1.7)	○	○	○	○
239 1C	01A45981F01	Assy., Rivet, Plate Base	○	○	○	○
240 1C	04C42091G12	Ring, "E" (M1.2)	○	○	○	○
241 1C	43A41072F02	Spacer	○	○	○	○
242 1C	43A41072F03	Spacer	○	○	○	○
243 2C	41A45638F01	Spring, Head Adjust	○	○	○	○
244 2C	04S40070G56	Washer, Flat (M2.1)	○	○	○	○
245 2C	43A41079F01	Spacer	○	○	○	○
246 2C	41A41453F01	Spring, Pinch Roller	○	○	○	○
247 2C	49A43395F01	Roller, Head Base	○	○	○	○
249 2D	01T51011F01	Assy., Pinch Roller	○	○	○	○
250 3D	*	Assy., Rivet, Head Base	○	○	○	○

NOTE: * The parts without part numbers are not supplied.

Symbol No.	Part No.	Description	Models			
			360	36M	36N	38N
251 1D	45A41392F01	Link, Connection	○	○	○	○
252 1D	41B41559F12	Spring	○	○	○	○
253 1D, 2D	43A42872F01	Spacer	○	○	○	○
254 2D	45B41068F01	Lever, Sub	○	○	○	○
255 2D	*	Assy., Rivet, Eject Lever	○	○	○	○
256 2D	41C45984F10	Spring	○	○	○	○
257 3D	*	Assy., Rivet, Frame Lever	○	○	○	○
258 3D	03S56479F02	Screw, Bind (M2.3x8)	○	○	○	○
259 4D	03S56479F05	Screw, Countersink (M2x4)	○	○	○	○
260 5D	*	Assy., Rivet, Chassis	○	○	○	○
261 5D	03S43997P62	Screw, Round (M2.6x3)	○	○	○	○
262 6D	44A51604F01	Gear, Change	○	○	○	○
263 6D	04S40075G03	Washer, Polyslider (M1.7)	○	○	○	○
264 6D	44A51603F01	Gear, Reverse Idler	○	○	○	○
265 6D	44A51602F01	Gear, Pulley Wheel	○	○	○	○
266 7D	01T42014F01	Assy., Flywheel	○	○	○	○
267 8D	01V41500F39	Assy., Flywheel Bracket	○	○	○	○
268 1E, 3E	41C45984F12	Spring	○	○	○	○
269 3E	*	Bracket, Eject, Mute	○	○	○	○
270 3E	03C40014G15	Screw, w/Washer (M2x8)	○	○	○	○
271 3E	01V53600F83	Assy., Eject Lever	○	○	○	○
272 4E	45B51596F01	Lever, R/F Release	○	○	○	○
273 4E	45A51599F01	Lever, Lock Reverse	○	○	○	○
274 5E	41C45984F13	Spring	○	○	○	○
275 5E	03S40019G03	Screw, F-Lock (M2x4)	○	○	○	○
276 5E	01V00100S50	Assy., SW P.C.B.	○	○	○	—
277 6E	01V53600F85	Assy., Head and SW	○	—	○	○
	01V53800F89	Assy., Head and SW	—	○	—	—
278 6E	75B44632G13	Pad, Cushion	○	○	○	○
279 7E	42A40969F01	Belt	○	○	○	○
280	04A66841F01	Spacer, Spring Pinch	○	○	○	○
Miscellaneous Parts						
501 2A	01V61500F28	Assy., Motor	○	—	—	—
	01V61500F28	Assy., Motor	—	○	○	○
502 3E, 4A	40T41665F01	Switch, Slide	○	○	○	○
503 3D	40T52216F01	Switch, Micro	○	○	○	○
504 5D	01T51605F01	Assy., Reverse Solenoid	○	○	○	○
505 5E	88T50977F01	Head, Playback	○	—	○	○
	88T45248F01	Head, Playback	—	○	—	—
506 7B, 7C	40T40641U02	Switch, Reed	○	○	○	○

NOTE: * The parts without part numbers are not supplied.

Replacement of Mechanical Parts

1. Removal of Cassette Deck

(1) Remove cassette deck by following the disassembly instructions.

2. Removal of Eject Lever Assembly

(1) Remove the three screws marked "○" in Figure 1.
(2) Remove eject lever assembly.

3. Removal of Deck Cover

(1) Remove the one screw marked "★" in Figure 5.

4. Removal of Deck Front Bracket

(The deck front bracket is not provided to some models.)

(1) Remove two screws marked "◊" in Figure 5.

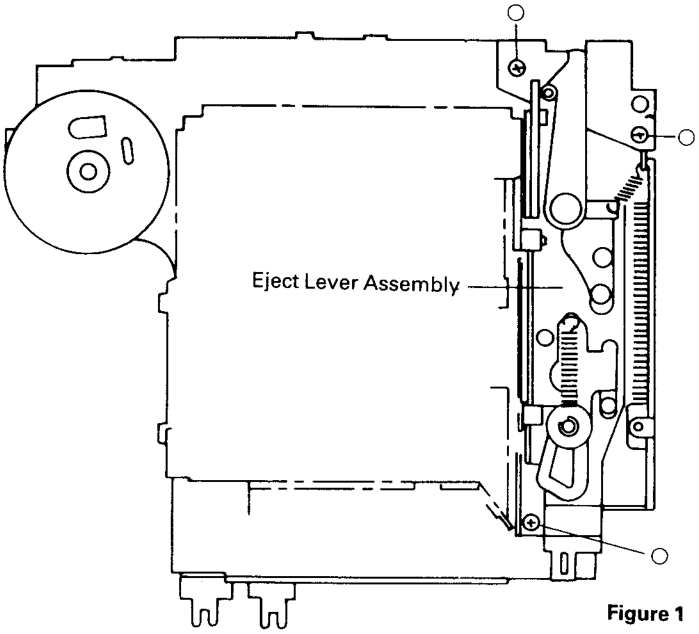

Figure 1

5. Replacement of Head

(1) Remove eject lever assembly.
(2) Remove the solder from the screw marked "△" and then remove that screw and the two screws marked "□" in Figure 2. Then remove the head and slide switch P.C. board.
(3) Remove head from the P.C. board.
(4) Replace the head, fix the new head and slide switch P.C. board loosely with three screws and assemble in the reverse order of disassembly.
(5) After assembling, adjust the position of the head and switch P.C. board as shown in Figure 3 so that the slide switch is equidistant from "normal" and "reverse". After adjusting, solder the screw marked "△" in Figure 2.
(6) With the test tape (MTT-114), adjust the head azimuth. (Refer to Head Azimuth Adjustment.) After adjusting, apply the Neji-lock to fix the screws.

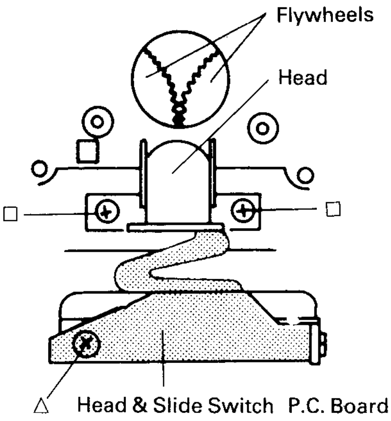

Figure 2

6. Replacement of Pinch Roller Assembly (L)

(1) Remove eject lever assembly.
(2) Remove pinch roller spring (L), "E" ring and washer to remove the pinch roller assembly (L) as shown in Figure 4.
(3) Replace the pinch roller and clean it with absolute alcohol. Assemble in the reverse order of disassembly.
(4) With the test tape (MTT-111), check tape speed and wow/flutter.
(5) Remove pinch roller assembly (R) in the same manner as described above.

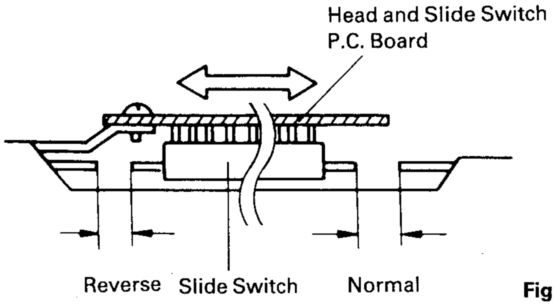
Head and Slide Switch
P.C. Board
Reverse
Slide Switch
Normal

Figure 3

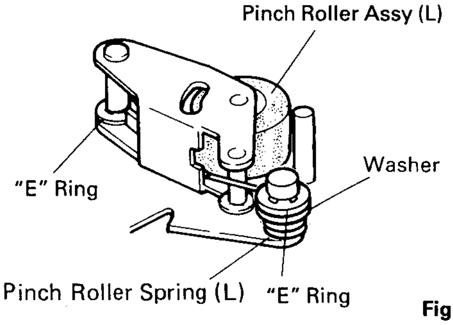
Pinch Roller Assy (L)
"E" Ring
Washer
Pinch Roller Spring (L)
"E" Ring

Figure 4

7. Replacement of Motor

(1) First remove the lead wire from the motor side.
(2) Remove two screws marked "●" in Figure 5.
(3) Replace the new motor. Assemble in the reverse order of disassembly.
(4) With the test tape (MTT-111), check tape speed and wow/flutter.

8. Replacement of Belt and Flywheels

(1) Remove three screws marked "X" and flywheel bracket in Figure 5 to take off the belt and the flywheel. Be careful not to lose the washers (Figure 6) as they come loose when the flywheels are removed.
(2) Replace the belt and flywheels, clean with absolute alcohol and assemble in the reverse order of disassembly.
(3) With the test tape (MTT-111), check tape speed and wow/flutter.

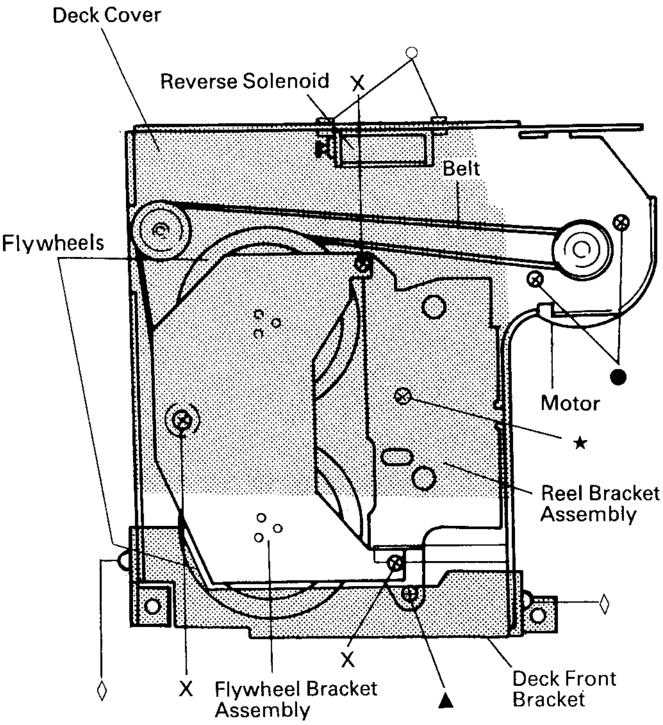
Deck Cover
Reverse Solenoid
X
Belt
Flywheels
Motor
●
★
Reel Bracket Assembly
◊
◊
X
Flywheel Bracket Assembly
X
▲
Deck Front Bracket

Figure 5

9. Replacement of Reed Switch P.C. Board and Reel

(1) Remove two flywheels.
(2) Remove the one screw marked "▲" in Figure 5.
(3) Remove the two screws marked "■" in Figure 6 to remove the guide bracket rivet assy.
(4) Remove B.T. spring in Figure 6 from reels and then remove the reel bracket.
(5) Remove the two screws marked "☆" in Figure 7 and disconnect the wire for the removal of the reed switch P.C. board
(6) Remove the two lock washers in Figure 7 and the two reels.
(7) Assemble reel bracket after replacing with new reels and reed switch P.C. board. Assemble in the reverse order of disassembly, and confirm the proper positioning of the B.T. spring.
(8) With the test tape (MTT-111), check tape speed and wow/flutter.

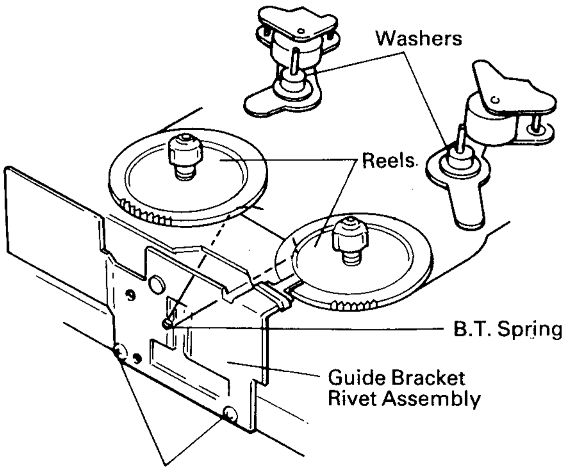
Washers
Reels
B.T. Spring
Guide Bracket Rivet Assembly
■

Figure 6

10. Replacement of Reverse Solenoid

(1) Remove two screws marked "○" in Figure 6.
(2) Remove reverse solenoid.
(3) Replace the solenoid and assemble in the reverse order of disassembly.

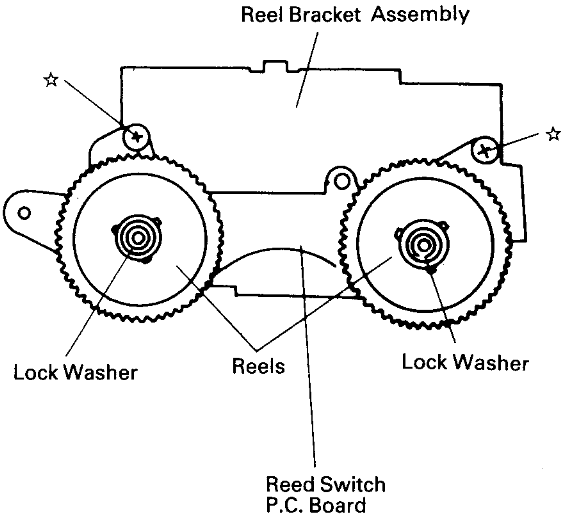
Reel Bracket Assembly
☆
☆
Lock Washer
Reels
Lock Washer
Reed Switch P.C. Board

Figure 7